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# FIRE ENGINEERING

*The Journal of the Fire Protection Profession Since 1877*

JULY, 1944 Vol. 97, No. 7

Wrecked Tank Truck Sends Burning Gasoline Down Street at Schenectady. *(See Article in this Issue)*

A CASE - SHEPPERD - MANN PUBLICATION

# Their Fun is your HEADACHE

## Prepare Now for this EMERGENCY

with the

# EMERSON RESUSCITATOR

A fine summer's day—a crowded beach—everyone happy and carefree—Then asphyxia strikes—with the tragedy of a drowning!

Every chief who protects a bathing beach, a pond, or just a water-hole where kids swim has this potential hazard—Your next call might present this problem. Be prepared with the finest equipment available—The Emerson Resuscitator with its automatic signal of froth, usually present in drowning cases, and its aspirator to remove it, has demonstrated its superiority in America's foremost parks and beaches.

★ *Send for literature or an actual demonstration.* ★

**J. H. EMERSON COMPANY**

*Representatives in Principal Cities*

22 COTTAGE PARK AVENUE • CAMBRIDGE, MASS.

# *Equal Volume in all Directions —*

## FEDERAL VERTICAL SIRENS

*FEDERAL Vertical Sirens are available in sizes from 2 to 7½ HP.*

One of the great advantages of FEDERAL Vertical Sirens is that they are designed and constructed to radiate sound equally in all directions. The housing, though weatherproof, does not muffle the sound at any point within its circumference.

The tone volume of these sirens is powerful and clear. Each size is built with ample overload capacity, the horsepower developed far exceeding the rating—assurances that signals will be heard at maximum distances, and that FEDERAL Sirens will be ready for all emergency conditions.

FEDERAL also furnishes remote controls which permit the use of one or more remotely located operating switches. These controls are equipped with thermal cutouts which protect the siren from overheating and burnouts resulting from short circuits, single phasing, or unusual current surges. Automatic, push button operated general alarm controls are also available from FEDERAL.

Permission to purchase should be obtained on WPB 1319—available at your nearest WPB office.

***WRITE FOR BULLETIN***

# FEDERAL ELECTRIC CO., INC.

**SIREN HEADQUARTERS**

8702 So. State Street Chicago 19, Illinois

# FIRE ENGINEERING

*A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection*


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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

## Easy Money!

CITIES today have funds available for purchases of *new equipment* and for *replacements*, a heavy backlog that has piled up during these war years when fire departments have been handicapped at every turn.

● And the priority situation has eased up considerably, thanks to the efforts of several conscientious workers whom we need not here mention by name.

## Look to August

● As result of all this potential spending the fire field is in a most receptive mood, reflected in the unusual large number of manufacturers who are asking for space in our forthcoming Fire Chiefs Convention Number in August, to present their products both old and new.

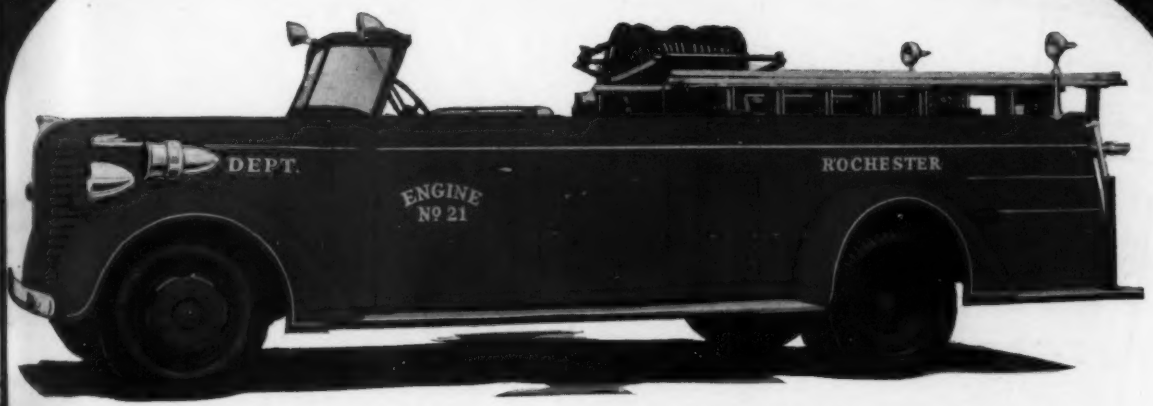
● Look for this big issue next month —the finest in all our 67 years of service to the field; and if you are a manufacturer, remember that the closing date for advertising reservations is July 25.

The Publishers


**FIRE ENGINEERING**

The Journal of the Fire Profession since 187[illegible] published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U. S. and Latin America, $2.50 a year; Canada, $3; Foreign, $3.50. Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 13, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1944, by Case-Shepperd-Mann Publishing Corp. ¶KARL M. MANN, President; I. HERBERT CASE, Vice-President and General Manager; FRED SHEPPERD, Secretary and Editorial Director; W. J. GIBSON, Eastern Representative; WM. H. TOPHAM, Circulation Manager. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif. LOS ANGELES: AUGUST HAURIN, 6000 Monte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

A CASE-SHEPPERD-MANN PUBLICATION
*"Specialized Leadership"*




**One of four "Buffalo" Invincible 750 g.p.m. Triple Combination Pumpers as recently delivered to the City of Rochester, N. Y.**

# SAFE

## LOW CENTER OF GRAVITY

## BUFFALO FIRE APPLIANCE CORPORATION

**BUFFALO . . . . NEW YORK**

# MORE PROOF!

## KENT COUNTY, MICHIGAN FIRE DEPARTMENT MAKES REMARKABLE RECORD

## 201 FIRE RUNS . . . . . .

## PROPERTY SAVED - $226,985.00

This farm house is typical of the rural structures to be found in Kent County. Many are located far away from adequate water supplies—far away from Low-Pressure Pumpers. As the FMC High-Pressure Fog Fire Fighter travels fast and carries its own water supply, it knocks down a fire in a very few minutes.

You will be interested in the first report of the Kent County Fire Department. First—because it shows how good the FMC Fog Fire Fighter really is. And secondly—because it proves that a rural, volunteer fire organization can be operated on an efficient basis.

The Kent County organization was established by a special act of the Legislature and organized with the help of Extension Service. Surveys were made. Meetings were held. And hundreds of volunteer firemen responded.

Then—*five* FMC High-Pressure Fog Fire Fighters were purchased from the John Bean Mfg. Co.

*Look at the Record!* 201 Rural Runs! Property on Fire Saved—$226,985! Total losses 'way below rural average—only 11!

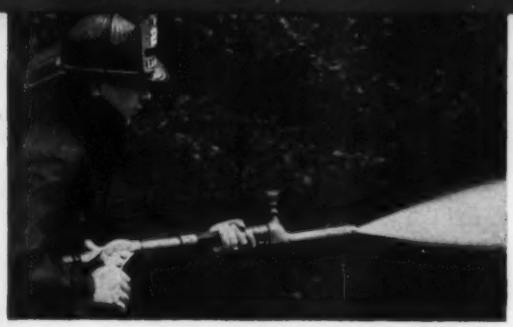
FMC HIGH-PRESSURE PUMP. Built Only by Bean. This is the pump that has revolutionized modern fire-fighting technique! It delivers and maintains 800 lbs. pump pressure—easily—without overworking.

### Fight Your Fires This Modern Way

Fires can be put out faster and with less water with FMC High-Pressure Fog. Why? Because the high pressure gives you a combination of finely-atomized water and high velocity—just what you need to *blast, cool* and *smother* flame. Investigate! Get the facts about this new and revolutionary fire-fighting technique. Right now—the Armed Forces are taking most of the production of FMC High-Pressure Fog Fire Fighters. But—you should be ready to modernize the moment civilian needs can be met. Start planning — now!

BUILDERS OF BEAN HIGH - PRESSURE

# FMC HIGH-PRESSURE FOG EFFECTIVELY SMOTHERS FLAME



**THE FMC FOG FIRE FIGHTER GUN** can be adjusted for all types of fires. Fireman above is holding trigger release with his right hand and adjusting barrel with his left hand. By turning the barrel slightly, he can change the flow from a straight stream to a wide fog pattern, for close-up work.

**IT IS A ONE-MAN JOB** to fight fire with the FMC Fog Fire Fighter Gun. With pressure on, it practically carries itself and can be poked into cellars, attics or holes in partitions. If the fire is intensely hot, use the protecting spray nozzle which insulates the fireman's face from the heat.

**ONLY THE FMC HIGH-PRESSURE FOG FIRE FIGHTER PACKS THE NEEDED PUNCH TO PRODUCE AND MAINTAIN 800 LBS. PUMP PRESSURE. THIS HAS BEEN PROVED AT HUNDREDS OF TOWN, RURAL AND AIRPORT FIRES.**

**STANDARD FMC FOG FIRE FIGHTER.** A self-contained fire-fighting unit. Carries its own water supply and complete fire-fighting equipment. Provides two guns of 30 gallons each at 600 lbs. nozzle pressure.

## FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

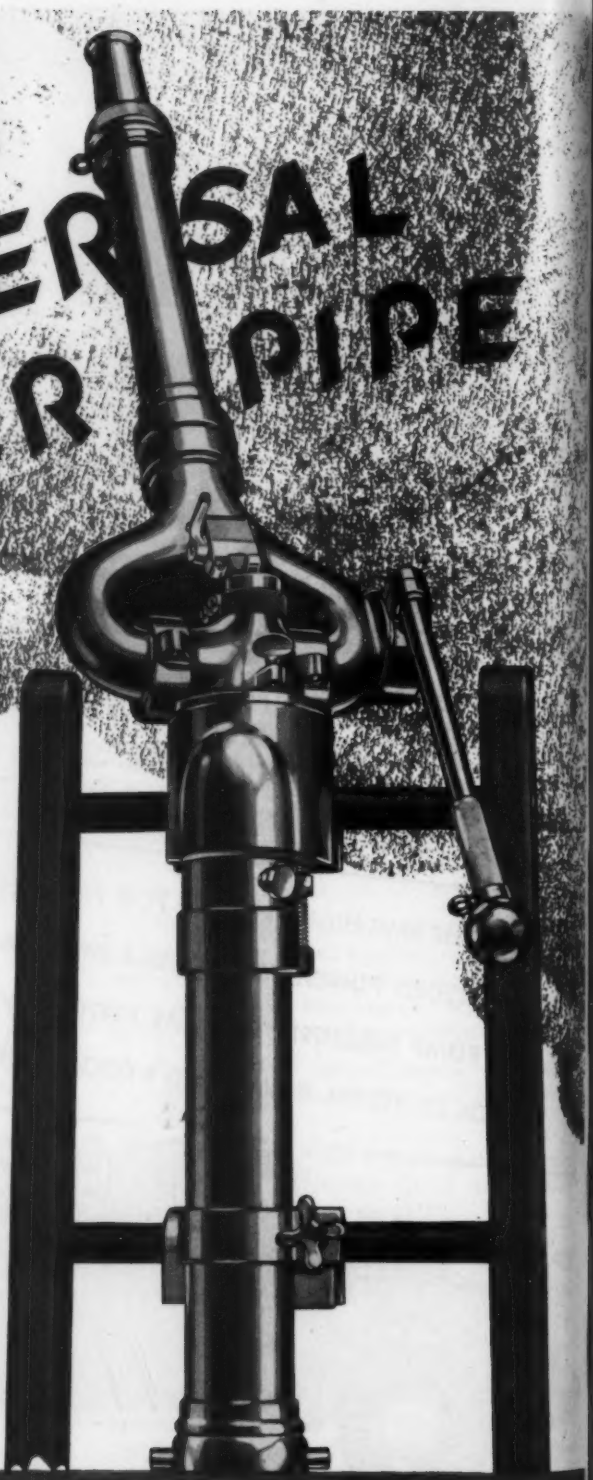
CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

**FOOD MACHINERY CORPORATION**

JOHN BEAN MFG. CO., 709 HAZEL ST., LANSING 4, MICH. • BEAN-CUTLER DIVISION, 409 JULIAN ST., SAN JOSE, CALIF.

PUMPS FOR OVER SIXTY YEARS

# AKRON MULTIVERSAL LADDER PIPE



**Here is a fire fighting necessity — a portable ladder pipe to convert your ladder equipment into a water tower featuring:**

**MINIMUM WEIGHT—Fabricated from AKROLITE, a corrosive resistant aluminum alloy.**

**BALANCED—Engineered for minimum ladder strain.**

**EFFICIENT—Minimum friction loss, efficient stream straightener.**

**CAPABLE AND FLEXIBLE—Engineered for a wide range of operation. Three separate smooth bore interchangeable nozzle tips engineered for solid, far reaching streams.**

**INCOMPARABLE DESIGN—Patterned after the time tested and proven Akron Multiversal Portable Deluge Nozzles.**

**AKRON BRASS MFG. CO., INC.**
**WOOSTER , OHIO**

# AKRON BRASS
## FIRE FIGHTING EQUIPMENT

*Mack 505 Triple Combination Pumper . . . a new addition to the Moultrie, Georgia, Fire Department.*

***A fire has two strikes on it from the start when it's up against a Mack. For 33 years Mack Fire Apparatus have been the last word in fire fighting efficiency. And they have been built to pump water until the fire is out. That's why fire chiefs from Maine to California will tell you— "You can't beat Mack!"***

**Mack**

**FIRE APPARATUS**

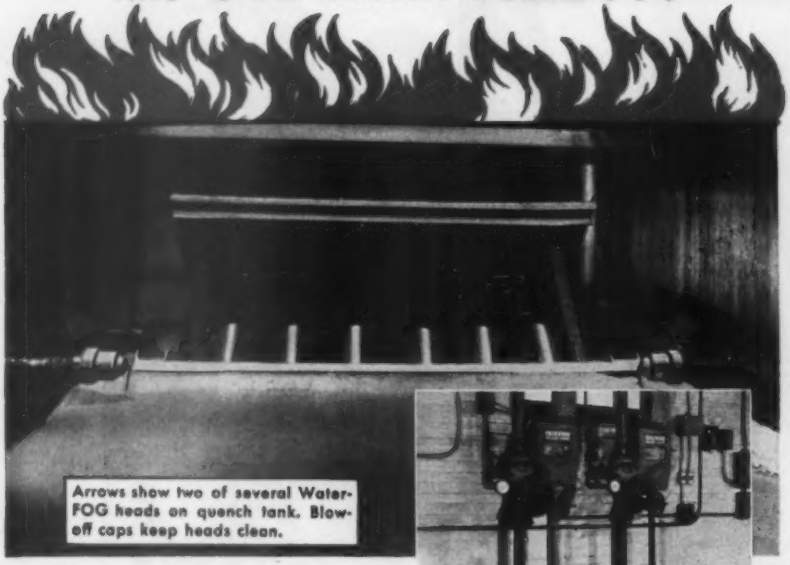
**If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.**

**IF YOU'VE GOT A MACK, YOU'RE LUCKY . . . IF YOU PLAN TO GET ONE, YOU'RE WISE!**

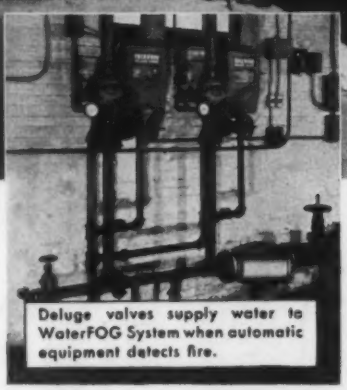
**Mack Manufacturing Corporation, Fire Engine Division**
**Empire State Building, New York 1, N. Y.**

*Please mention* FIRE ENGINEERING *when writing advertisers*

# THIS OIL CAUGHT FIRE . . .



Arrows show two of several WaterFOG heads on quench tank. Blow-off caps keep heads clean.



Deluge valves supply water to WaterFOG System when automatic equipment detects fire.

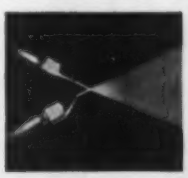
## ROCKWOOD WaterFOG *Put it Out!*

4,000 gallons of oil in a quench tank . . . shell casings passing through, hot from the hardening furnace . . . and a WaterFOG System protecting against fire.

Suddenly a burst of flame . . . the entire surface ablaze! Just as suddenly . . . an all-enveloping cloud of fog . . . snuffing the fire, cooling the liquid. In no time at all, production resumed — no damage, only the merest delay, thanks to WaterFOG.

Such is the experience of a shell plant in Chicago . . . another in South Bend . . . another in Worcester . . . where oil quench tanks are WaterFOG-protected. And other flammable liquid hazards are similarly protected — transformers, paint shops, dryers, oil storage, etc.

WaterFOG, being *water*, is cheap, plentiful. Being *fog*, it is effective on flammable liquid fires where spray and solid stream are unsafe. It works faster, cools a wider area, doesn't splash. Both Underwriters' Laboratories and Associated Factory Mutuals approve Rockwood WaterFOG installations; the Navy, Coast Guard, Maritime Commission and Army, and hundreds of plants use WaterFOG — fixed piping and hose nozzles. Write for Bulletin 123.



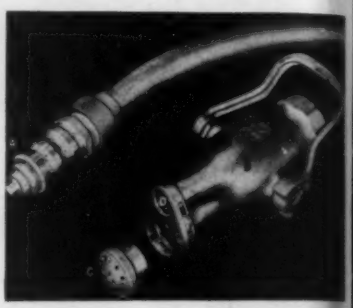
**WaterFOG is**— Water, broken into tiny foglets much finer than spray, by impinging streams from Rockwood nozzles. Floating over the combustion area, they absorb heat faster than spray or solid stream . . . cooling the fire, retarding vaporization . . . and changing into steam, shut off oxygen.

**ROCKWOOD SPRINKLER COMPANY**
54 Harlow St., Worcester 5, Mass.
*Specialists in Fire Protection Engineering, Equipment and Installation since 1907*

ROCKWOOD WaterFOG

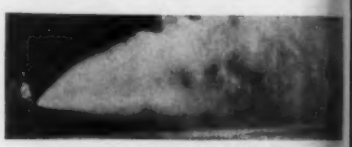
*Water Engineered by Rockwood Cools, Confines, Smothers Oil Fires*

## FOG for Cooling, Confining, Extinguishing or SOLID STREAM for Deep-Seated Fires

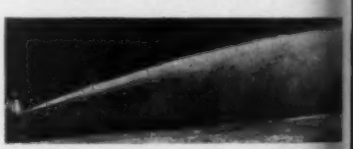


*Rockwood's SG-40 Nozzle Projects Either—by a Quick Movement of the Handle!*

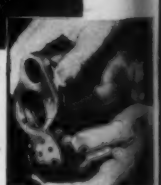
SG-40 Nozzle, and extension applicator for attachment to regular fire hose line. 1", 1½" and 2½" sizes.



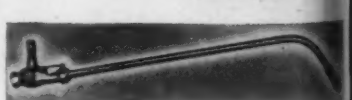
Discharging high-velocity WaterFOG with considerable forward projection.



Moving the handle causes a solid stream to be discharged.



*And for Fighting Fires Close Up—*
FOG Tip being removed . . .
. . . replaced by applicator.



With extension applicator attached, SG-40 projects low-velocity WaterFOG in ball-shaped pattern. 4' and 10' applicators fit 1½" nozzle; 12' applicator fits 2½" nozzle.

**Write for Bulletin 123,** giving more complete information on WaterFOG equipment.

**EXECUTIVES!** A colored movie (16 mm.) showing tests of Rockwood WaterFOG is available.

# M-1 vs. Muck

● Rugged men driving rugged trucks for Uncle Sam plough ahead into jungles and forests, through rivers and over trails that would make even a pack animal think twice. Naturally, a truck crew can expect to have to yell for help every so often.

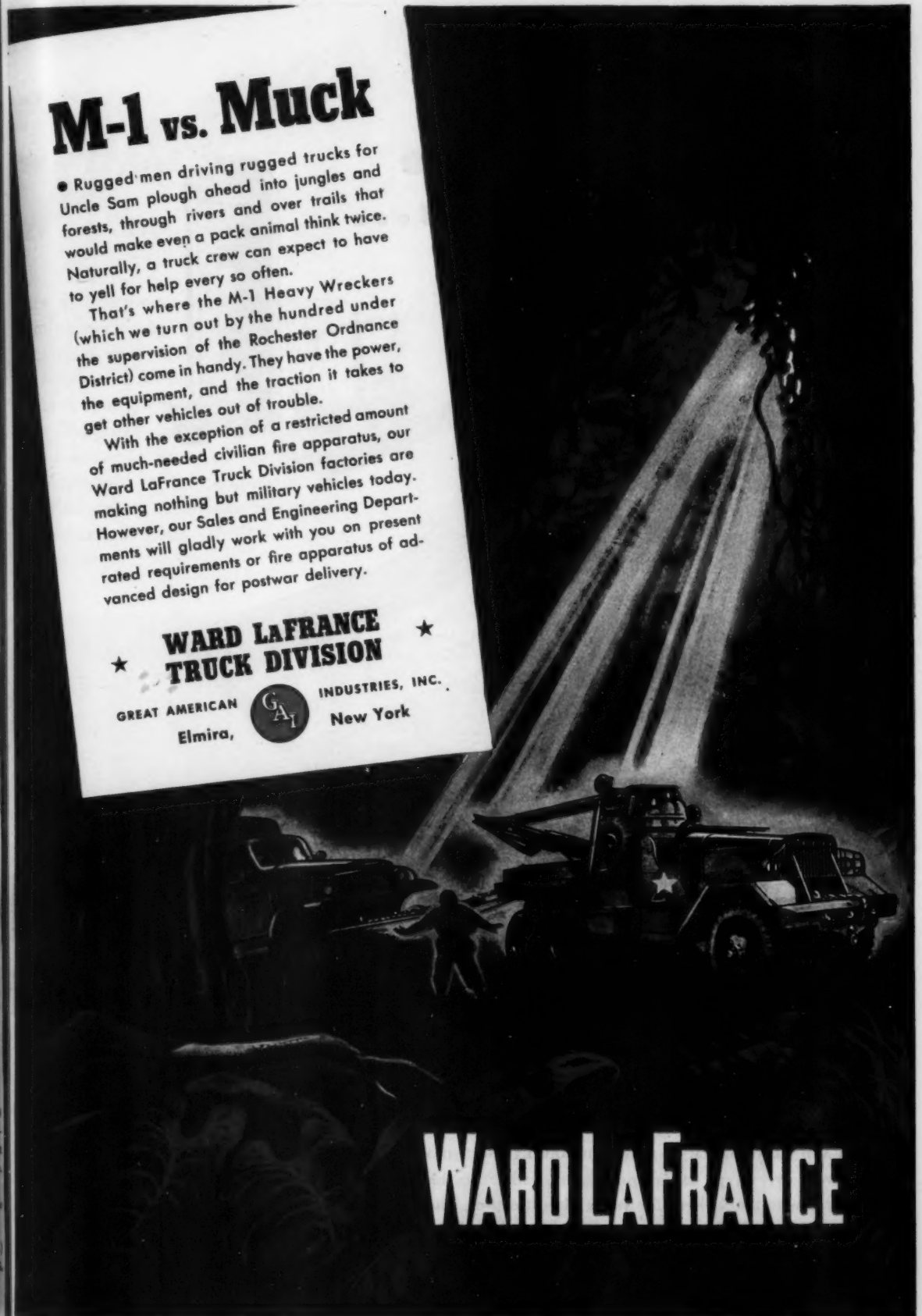
That's where the M-1 Heavy Wreckers (which we turn out by the hundred under the supervision of the Rochester Ordnance District) come in handy. They have the power, the equipment, and the traction it takes to get other vehicles out of trouble.

With the exception of a restricted amount of much-needed civilian fire apparatus, our Ward LaFrance Truck Division factories are making nothing but military vehicles today. However, our Sales and Engineering Departments will gladly work with you on present rated requirements or fire apparatus of advanced design for postwar delivery.

★ **WARD LaFRANCE TRUCK DIVISION** ★

GREAT AMERICAN INDUSTRIES, INC.

Elmira, New York



WARD LaFRANCE

# How to fight a fire before it starts...

## FREE BOOK HELPS KEEP EXTINGUISHERS READY FOR ACTION

You'll be prepared to nip fires quickly at your plant only if your *extinguishers* are ready. And that calls for periodic examination.

To make it easy for you to set up a maintenance system, Walter Kidde & Company has issued a booklet—"INSPECTION AND MAINTENANCE OF FIRST AID FIRE EXTINGUISHERS." It covers every type of equipment, tells where to locate them, how to mark them for quick identification, what to check, how and when to recharge. It suggests forms for keeping records. Write for your free copy today!

WALTER KIDDE & COMPANY, INC., 140 CEDAR STREET, NEW YORK 6, N. Y.

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# Seagrave ENGINEERS

## IMPROVING THE FIRE APPARATUS OF TODAY... PLANNING THE FIRE APPARATUS OF TOMORROW

Here at Seagrave, engineers are constantly planning better ways and means to combat man's worst enemy, fire . . . The research goes on day after day . . . research that is vital to every community. Seagrave engineers have produced some of the most outstanding developments in fire apparatus construction such as centrifugal fire pumps, all steel canopy cabs, safety steel aerial ladders, etc.

Seagrave's skilled engineers and expert mechanics are the reasons why you can buy Seagrave Apparatus with full confidence that it will give you year after year of dependable, trouble-free service.

★

THE SEAGRAVE CORP'N.,
Columbus, Ohio
Bickle-Seagrave, Ltd.,
Woodstock, Ont.

★

# SEAGRAVE

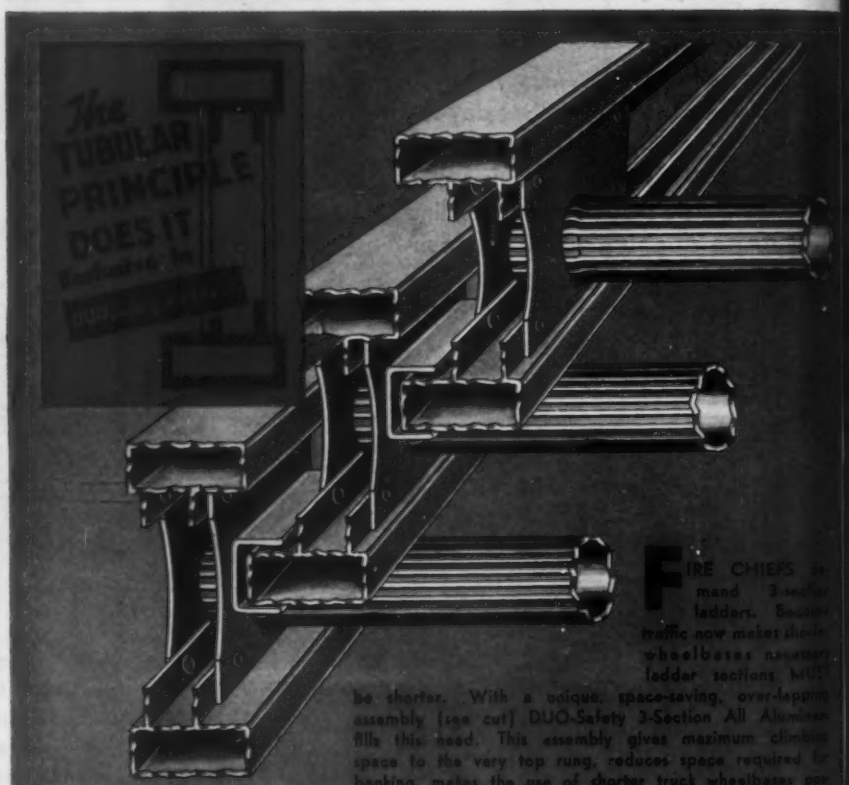
THE GREATEST NAME IN FIRE APPARATUS

*We shall appreciate your mentioning* FIRE ENGINEERING *when writing advertisers*

RIGHT! IT is STRONGER!

THREE-SECTION
SERIES 525A

NEW DUO-SAFETY *All Aluminum*
HAS EVERYTHING THE FIRE CHIEF
DEMANDS OF LADDER EQUIPMENT




FIRE CHIEFS demand 3-section ladders. Because traffic now makes short wheelbases necessary, ladder sections must be shorter. With a unique, space-saving, over-lapping assembly (see cut) DUO-Safety 3-Section All Aluminum fills this need. This assembly gives maximum climbing space to the very top rung, reduces space required for banking, makes the use of shorter truck wheelbases possible. And it does these things without the sacrifice of strength or light weight! DUO-Safety's exclusive Tubular I Principle does it! This rectangular extruded Duralumin rail, together with other structural refinements, gives the fire chief everything he's looking for, and makes DUO-Safety All Aluminum the ladder hit of the year!

SEND NOW FOR ALUMINUM FIRE LADDER CATALOG 75A

Get full description of 1, 2 and 3 Section DUO-Safety All Aluminum Fire Ladders. Ask your supplier or write DUO-Safety for form 75A.

Sold by Leading Suppliers Everywhere; Canadian Distributors, Bickle-Seagrave, Ltd., Woodstock, Ontario
DUO-SAFETY LADDER CORP.—809-811-813 NINTH STREET, OSHKOSH, WISCONSIN
*Also Makers of All-Wood Ladders and Compo-Wood-Aluminum Ladders*

NOTE:

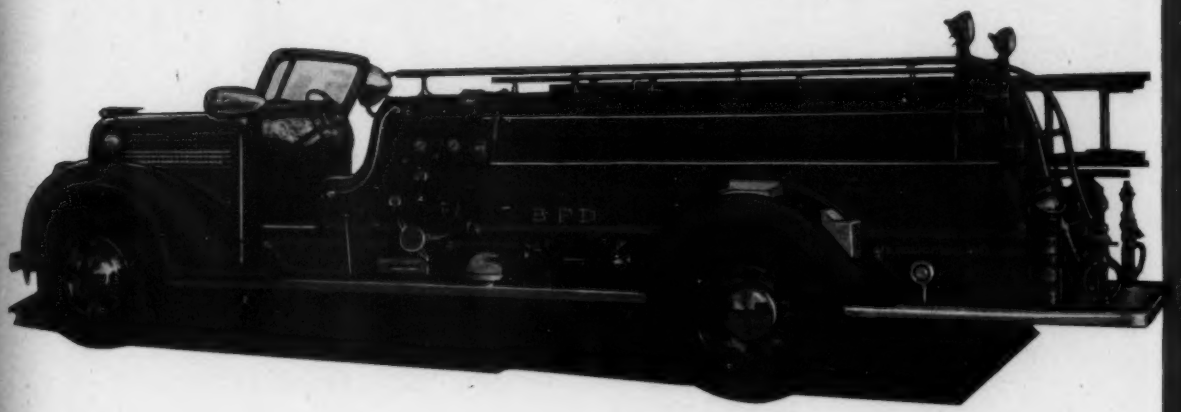
SERIES 700A CHANNEL CONSTRUCTION

This new Duo-Safety channel design is an outstanding development in light-weight pumper ladder equipment. All-aluminum (Duralumin) . . . all around husky construction gives you faultless quality and positive safety! Designed to replace the husky old type solid side wood pumper ladders.

TWO SECTION Series 700 A

# OREN

**"THE SOUTH'S ONLY FIRE TRUCK MANUFACTURER"**



**An OREN built for Burlington Fire Dept., Burlington, North Carolina**

★

**OREN** builds a complete line of Fire Trucks. Write for information

## OREN FIRE APPARATUS COMPANY

**1201-9 West Salem Avenue**
**ROANOKE, VIRGINIA**

# FASTER COUPLING-UP

FASTER
STREAMLINED
BETTER
MODERN DESIGN

# KLEERLINE COUPLINGS

The first few minutes makes a world of difference in knocking down a fire, as every chief knows. KLEERLINE couplings speed-up laying lines. The chiefs that use KLEERLINE couplings save time, too, because these new and better couplings can't possibly catch or drag as the old fashioned couplings always have done. Their scientific design does that. Specify KLEERLINE couplings on your next hose order. Change over completely to KLEERLINE couplings when the war is won.

KLEERLINE Couplings are made by a firm with a reputation for precision manufacturing over a period of 30 years.

★ INQUIRIES INVITED FROM RESPONSIBLE DEALERS IN FIRE EQUIPMENT ★

## ANDERSON FIRE-FIGHTING EQUIPMENT COMPANY, INC.

407 WEST 36th STREET, NEW YORK 18, N. Y.

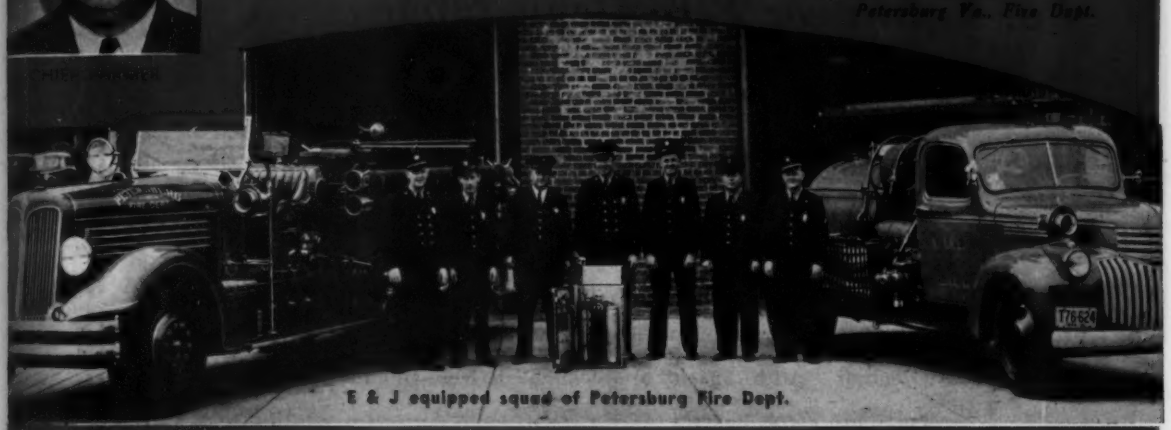
Phone MEdallion 3-3200

# Good Work at Petersburg

*"The Petersburg Fire Department had occasion to use its new E & J Resuscitator recently. Its great aid in the saving of life causes us to want to express our appreciation of its existence.*

*In the prevention of one tragedy the City of Petersburg and the Fire Department feel that the machine has paid for itself."*

CHIEF J. N. FARMER,
*Petersburg Va., Fire Dept.*



E & J equipped squad of Petersburg Fire Dept.

*Another Achievement for*

*The* E&J RESUSCITATOR INHALATOR and ASPIRATOR

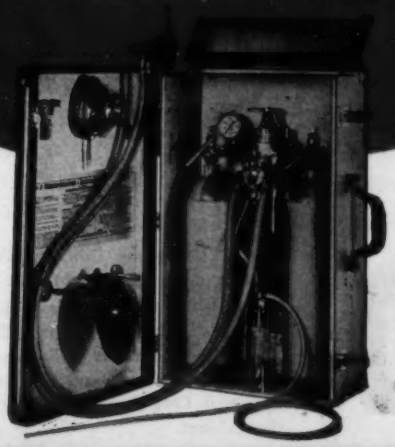
*FIRST CHOICE IN FIRST AID*

★ **The first time the Petersburg Fire Department used its new E & J Resuscitator, then in service only three weeks, the life of a man, overcome by smoke at a fire, was saved after it virtually appeared that he was dead. No wonder Chief Farmer was happy about it—and who wouldn't be under those circumstances?**

**Yet such performance is nothing unusual for the E & J. It is giving that kind of service all over the country all of the time. The number of lives saved by E & J equipment would make a long list.**

**E & J users enjoy the satisfaction and the feeling of security that go with having equipment of unfailing dependability—the best that money can buy.**

★ *For further information write any of our distributors listed below.* ★



**E & J MANUFACTURING CO., GLENDALE, CALIF.**

Philadelphia · New York City · Pittsburgh · 3832 W. 25th Ave., Denver, Colorado · Detroit, Mich. · Boston · Chicago

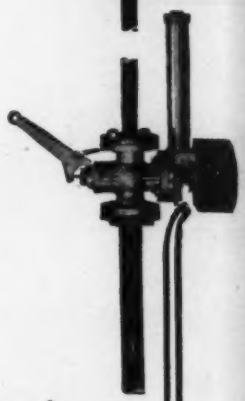
*Pioneers and Specialists in Mechanical Artificial Respiration*

# GAMEWELL

*A Complete*

# ALARM SYSTEM

## *For Volunteer Fire Departments*



THE GAMEWELL FIRE ALARM SYSTEM, designed especially for the smaller communities is characterized by its simplicity, low initial and maintenance costs.

The control cabinet includes the necessary storage batteries with rectifier, register for automatically recording alarm, testing instruments, line terminals and all other essentials — with capacity to accommodate from One to Forty fire alarm boxes.

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FIRE ENGINEERING

JULY, 1944 VOL. 97. NO. 7

# With the Editor

**The I. A. F. C. Conference** Plans for the Grand Rapids Conference of the International Association of Fire Chiefs, to be held August 28 to 31 inclusive, are coming along in fine shape. A splendid program has already been laid out and the array of exhibits is rapidly building up.

The attendance should be particularly good, for Grand Rapids is so located as to draw heavily from the populous mid-west section of the country, and the representation from Canada promises to be heavy.

The technical program will be particularly interesting this year. Demonstrations on the extinguishing of large magnesium fires will prove especially instructive. The review of the fog nozzle tests, carried out under the sponsorship of the National Board of Fire Underwriters, accompanied by motion pictures, will prove very illuminating. The reports of the several special committees, including Fire Apparatus and Equipment Priorities, Post-War Planning, Radio Communications, and Manpower will be particularly timely and interesting. Other features included in the program are shown elsewhere in this issue.

It will be noted that the topic of priorities for fire apparatus and equipment is to be discussed by N. A. Odum, Chief of Fire Defense Section, Governmental Division, War Production Board. Thus an opportunity to get first-hand information on this live subject will be provided all delegates present.

Because of the present overburdened condition of American transportation, and the numerous requests from Washington that meetings not essential to the nation's war effort be cancelled, it has been the feeling among some that our Conference should be postponed or cancelled. This, we believe, would be a serious mistake. Our meeting is most essential to the war effort. A review of the program will prove this. Furthermore many other conferences and conventions less essential in these times are being held in all parts of the country.

Insofar as our immediate problem of transportation is concerned, congestion in the mid-west is far less than in the south and far west, and no serious trouble should be encountered by the great majority in going to Grand Rapids or returning therefrom.

Because Grand Rapids has few war industries, the local hotel situation is good. The three hotels within a short radius of the meeting place alone have 1,450 rooms. These are the Pantlind (headquarters hotel), the Rowe and the Morton. In addition, there are six other hotels having from 150 to 200 rooms each.

It is urged, however, that both hotel and railroad reservations be made as early as possible.

Fred Sheppard

# The OCD Fire Protection Property Program

COLONEL E. L. WHITE

WHEN the Office of Civilian Defense was born on May 20, 1941, the British Army was fighting with its back against the Suez Canal and under seige at Tobruk; the Germans had just occupied Crete from the air, and London was just recovering from the "big blitz" which destroyed so many historic monuments. The realization that a new type of warfare which was no longer confined to the military forces but directly affected the civilian population immediately appeared, and with this realization a demand for some sort of an organization to work upon this new problem seemed imperative. Of course, no knowledge nor experience were available as a guide on which to base any nationwide civilian protective organization, and the only sign posts were British experience and the technical knowledge of qualified experts on certain aspects of protection which had to be more or less pulled out of thin air.

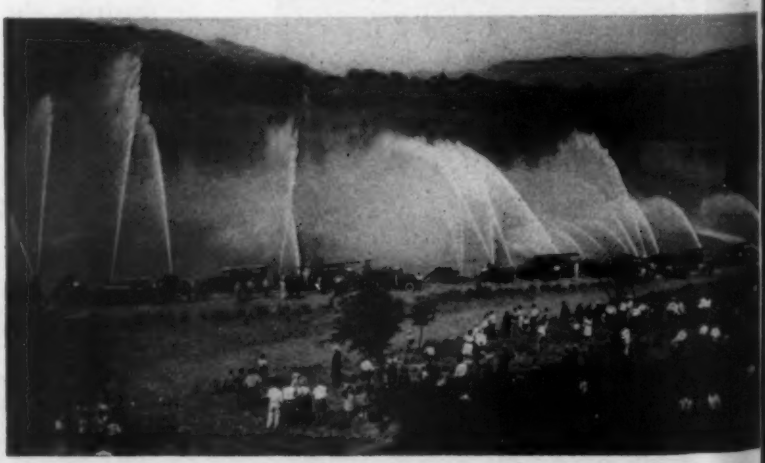
Auxiliary Fire Apparatus at Norfolk, Va., on Which Are Mounted OCD Pumping Units.

The President's Executive Order 8757 dated May 20, 1941, made provision for means whereby information on which action should be based could be gathered and machinery set up for the establishment of a nationwide organization to "serve as a center for the coordination of Federal Civilian Defense activities which involve relationship between the Federal Government and subordinate political agencies." All the provisions of the enabling order were purely concerned with development of plans, and no provision was made for enrollment of personnel or procurement of protective equipment and property.

The tragedy of Pearl Harbor and the declaration of war by Germany necessitated the translation of the civilian defense service from a planning operation to one which demanded actual accomplishment, and this fact changed and energized the consideration of the problem so that the plans which had been made might be translated into the actual performance. The planning, however, had progressed so far that by the end of the year the work of the various technical and advisory committees had been solidified and coordinated and Congress was willing to accept the recommendations of the then Director and to prepare and pass an appropriation act to implement the property program. This was accomplished by the adoption of Public Law 415 of the 77th Congress which authorized the appropriation on January 27, 1942, of the sum of $100,000,000 to be devoted to the procurement of facilities, supplies and service for the adequate protection of persons and property "from bombing attacks, sabotage, and other war hazards in the United States, its territories and its possessions." This Act was further strengthened by the actual appropriation, on February 21, of the $100,000,000 recommended by Public Law 463, and the administration of this Act was again clarified by Executive Order 9088 which specified the conditions under which the money should be spent and the limitations under which the property should be used, but this Order was not actually signed until March 6, 1942.

By this time, however, plans had been developed to a point where sufficient information was available to immediately commence procurement of the material and equipment on March 27 when the funds were finally and actually placed at the disposal of the agency.

The actual procurement orders were placed with the War Department on April 2 and the first of these was a request for $36,000,000 to be turned over to the Office of the Chief of Engineers to buy and deliver to the OCD approximately 18,000 units of fire fighting equipment complete with hose and accessories. This was the real birth of the fire protection program, and the request was based upon the information gathered by and the concurrence of opinion of the following representative committee which served voluntarily as an advisory council to the Director of the Office of Civilian Defense: George Booth, Chief Engineer, National Board of Fire Underwriters; W. W. Dean, War Department, Corps of Engineers; Horatio Bond, Chief Engineer, National Fire Protection Association; George Angell, Fire Equipment Section, War Production Board; Roy Wilson, National Bureau for Industrial Protection; George Richardson, International Association of Fire Fighters; Chief Palmer, International Association of Fire Chiefs, Charlotte, N. C.; Commander Hughes, Bureau of Yards and Docks, Navy Department; William French, OCD Representative; and Daniel



OCD Pumping Units Staging a Pumping Demonstration at Wheeling Wharf, Wheeling, W. Va., with Auxiliaries in Charge of all Units. Chief Edward T. Rose, of the Wheeling Fire Department, Reports that His Auxiliary Force now Numbers Two Hundred and Sixty Men.

Deasy, Battalion Chief, New York City.

Then commenced the struggle to obtain, in spite of other war demands, the tremendous amount of fire protective equipment which has since been produced and distributed by the OCD. It will be recalled that at that time supplies of critical materials were lacking. There was no copper for the hose couplings nor for the bearings in the pumping units. There was no rubber for the hose. The supply of cotton for the jackets was tied up pending a decision as to whether any of it could be diverted from Army uniforms or from the manufacture of explosives. In short, practically all former ideas regarding the make-up of old fashioned fire equipment had to be discarded and some available substitutes developed.

Of course, facilities had to be discovered, specifications had to be drawn and redrawn, priorities had to be established and revised contracts superseded by demands of the Armed Forces had to be placed on other facilities, and all sorts of difficulties normal to a subsidiary war effort had to be experienced and surmounted; but in spite of all these difficulties, the present OCD equipment was finally procured and delivered within a space of less than two years. When it is considered that all this material and equipment was obtained in addition to the tremendous demands of the other war needs, it will be appreciated that a great deal of loyal and patriotic effort on the part of manufacturers and technical committees was involved.

## Coastal Zones Designated as Target Areas

After the institution of the procurement, there remained the difficult question of adopting policies and formulas for the placement of the equipment in question, and in the beginning the OCD looked to the War Department for recommendations as to appropriate distribution. This resulted in the adoption of a policy whereby at first the Coastal Zones along the Atlantic and Pacific were designated as target areas, and in these zones communities which contained essential war plants were given prior consideration on a basis which practically duplicated the amount of existing equipment in the localities approved. Later these areas were extended to include narrower zones along the Gulf of Mexico and around the Great Lakes, and it was to those areas that next consideration was given.

Under the existing law, the distribution of the equipment is confined to the designated political subdivisions, and it was not the intent nor purpose of the OCD program to actually protect the war plants there located. This responsibility remained in the Army and Navy, and the OCD protection was intended purely for the civilian population and property surrounding or near the important war industrial areas.

Later, in accordance with standard fire protective theory, a Mutual Aid program was instituted so that a wider spread of protection could be made to the localities. Although, unfortunately, this program never reached full fruition, it did result in the establishment of laws and ordinances providing mutual aid with "legal" support heretofore lacking, and it created fire coordinators or administrators in nearly every state in the country.

The legal restrictions under which the OCD property and equipment could be distributed were also often misunderstood and it was difficult at times to impress upon the various political divisions that the handling of Government-owned property necessitated certain technical safeguards which demanded the accomplishment of rather rigid assurances and obligations, and that the property could not be handled as freely as could privately owned or even municipally owned equipment. It required and is still requiring a rather extended and difficult educational program to convince certain individuals that Governmental regulations cannot be discarded by any personal action or decision and that even though the procedure may appear irksome it is nevertheless necessary to protect the property which has been paid for by public funds and which has been designated as devoted to certain specified purposes.

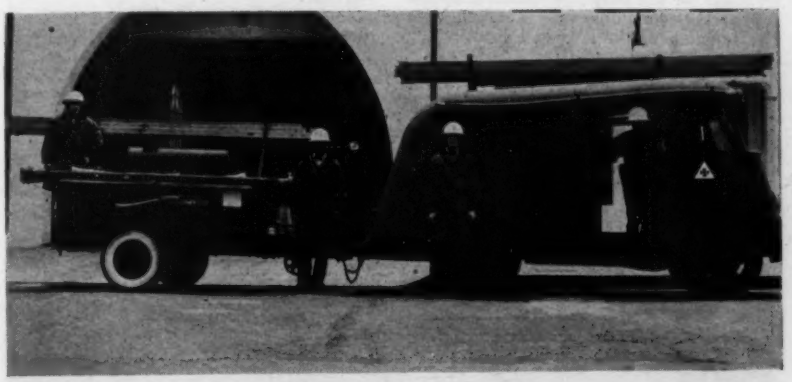
## 15,000 Units Distributed

The ultimate result of the program, however, has been the distribution to localities of over 15,000 complete units of the familiar trailer, skid, and front mount types, complete with hose and accessories, to about 2,800 individual communities.

Behind this brief statement, however, there are some interesting comparisons. If it will be recalled that the average useful life of a piece of fire equipment in normal times is fifteen years, it naturally follows that about one fifteenth of the existing apparatus is replaced each year. The approximate doubling of the available protection in the localities where this equipment was delivered was accomplished in two years and this, therefore, resulted in approximately seven and one-half times the normal supply which would have gone into those localities, in addition to the tremendous needs of the Armed Forces and the compliance with such civil demands as were still allowed. In 1940 the entire production of service hose for the country amounted to about 14,000,000 feet, and the first idea was to supply each OCD unit with 1,500 feet which would have resulted in a demand of about 30,000,000 feet, or more than the entire complete pre-war production for two years. Of course, any acquisition of hose on this scale was impossible in the face of the demands of the services, but the OCD has actually acquired 10,800,000 feet of service hose which, if coupled together, would reach from Chicago to San Francisco and several miles out in the Pacific Ocean.

It might be interesting to note that the combined pumping capacity of all the OCD units, if they could be operated together, would result in the movement of 8,350,000 gallons of water a minute, which is far more than the over-all demands of the City of New York an entire day, and results in unbelievable figures. For example, the largest new battleships of the U. S. Navy displace about 40,000 tons, and if all the OCD units could be put to work at one time enough water could be pumped to float one of these tremendous ships in a little over a minute. It might be interesting to know that this fire fighting equipment which has been shipped to the field would, if loaded in minimum freight car loads, require the services of about 20 trains of 100 cars each, or, if combined into one, a single freight train 19 miles long.

Of course, those of you who read this article are undoubtedly aware of the fact that the little brown units are by no means of the same grade as the peacetime apparatus which used to be available and which will come back after the war. The restrictions on the use of critical substances, such as rubber, brass and various alloys which are easily procurable in peacetimes, made it impossible to consider supplying a type of apparatus of the same standard as before the war. Many of you will remember that we were unable to obtain rubber tires for the first trailer units and had to use steel tired wheels which did not work out and had to be supplanted. You are also aware that no brass or bronze were obtainable for couplings and malleable iron had to be substituted. This situation resulted not only in a change in the type of equipment supplied but also in the development of entirely new manufacturing facilities because the same concerns which could easily cast and machine brass couplings were not set up to handle malleable iron. The final blow came when we could not obtain a comparatively minor amount of bronze rod for the hinges in the Siamese clapper valves, and it was not until considerable time had elapsed and considerable experimentation gone through that we were finally permitted to get the non-ferrous metal needed and thereby fill out the assortment of accessories which had to



San Diego, Cal. Auxiliaries Have Cab-over-Engine Units to Tow OCD Trailer Pumps. The Truck Carries a Skid-Mounted Pump and Four Men, with Ladders and other Equipment.

be delivered with each pumper. This was the real effective cause of the delay in equipping the units which had already been issued.

It has now become evident that although the original plans of distribution were intelligent and were based upon the necessities caused by the imminent possibility of enemy air raids, the developments abroad have modified those needs, and a redistribution of available material should be made. Whereas the danger from air raids has lessened, the danger of damage from "other war hazards" has increased. Standard municipal equipment has become obsolete, and is not as effective as it was at the beginning of the emergency; many municipal departments are seriously affected by the withdrawal of professional firemen into the Armed Forces; new industrial areas have sprung up which need protection, and many other causes have contributed to make advisable a change in location of the already distributed material. Furthermore, the the Armed Forces are requisitioning large numbers of our units for service overseas so that the reserve which was originally contemplated no longer exists, and it is going to be necessary to develop by investigation and survey any equipment which is not being used in the localities to which it was originally loaned, so that it may be withdrawn and placed where a greater need exists. This is undoubtedly going to result in some dissatisfaction, but it seems evident that if properly manned and maintained there will still remain an ample supply of this equipment to provide a reserve to help protect areas which actually need such facilities. It is to be regretted that in some parts of the country the true purpose of the program was not entirely understood and sometimes lack of cooperation between various agencies occurred resulting in the fact that the need for the OCD equipment was not appreciated to the extent that the local authorities were willing to man and maintain it, and a portion of the material loaned has never been actually applied to the purpose for which it was procured.

Questions have been raised as to the post-war status of this equipment and as to the possible effect of its existence on the regular fire equipment manufacturing industry. The OCD can make no post-war plans. The legislation under which the office operates only allows the distribution of the material in one manner, and that is by loan to political subdivisions for the purposes specified above. Of course, this does not conflict with the demands of the Armed Forces which under war powers could requisition this material whether it was needed for civil requirements or not. The possibility of any of this fire equipment being sold will depend upon a change of legislation or a decision that it is no longer necessary for civilian defense and may be sold as surplus through the Surplus War Products Administration.

As to what is to happen to the equipment after the war, various suggestions have been made whereby it would be offered for sale to the communities in which it now exists; it could be made available for sale to rural fire districts; it could be offered to institutions, etc., etc.; but at present the OCD cannot authoritatively consider any of these possibilities.

Considering the possibility of local authorities purchasing and holding OCD equipment to take the place of standard apparatus, it would appear that where intelligent instructions and training have been given to the auxiliary firemen, there will have been aroused a fire prevention consciousness which will supply a reservoir of public opinion so as to influence municipal authorities against any such short-sighted and parsimonious policy. There will be plenty of additional fire protection needs developed throughout the country so that the OCD equipment can be made adequate for the lighter service of this type and no conflicts should occur with the orderly replacement and development of the regular departments.

The following questions have been raised with the request that the OCD give appropriate answers in order that the fire organizations in the field may have as much information as possible regarding the OCD fire equipment program:

1. **What is the actual status of the nation's auxiliary fire forces with respect to (1) personnel (2) OCD fire fighting equipment?**

So far as personnel is concerned, no adequate current information is available in the Office of Civilian Defense. The constant changes and probable diminution of the number of auxiliary firemen enrolled is, of course, a constant source of worry because of the feeling that a great deal of otherwise efficient equipment is not available for local fire protection because trained manpower is not on hand for its operation. This is a local problem which cannot at present be solved by the National Office of Civilian Defense.

So far as fire equipment is concerned, the National OCD has distributed over 15,000 fire protective units of 500 GPM capacity, complete with hose and accessories, to about 2,800 communities throughout the United States and its possessions. Some of this equipment appears to have been distributed in excess of current needs, and in the face of requests of the Armed Forces a program is contemplated whereby excesses will be withdrawn for the use of those services and to meet other needs.

2. **If a municipality has OCD fire fighting equipment which it cannot use or does not want, what should it do to dispose of it?**

Survey will be made in the near future by the National OCD of the actual requirements for OCD fire protective equipment in all communities, and when this survey is made, an opportunity will be given to every community to declare for transfer any equipment which appears to be above actual needs and desires. Such declarations, however, must be certified by the chief executive of each community and must consist of complete units with accessories; in other words, a community may not retain the hose issued for a unit without also retaining and demonstrating the need for the major unit for which the hose was issued.

3. **Is it possible for a municipality which has not previously received any OCD equipment to get it at this time?**

Yes, there is such a possibility, but an extremely slight one. No new original allocations will be made except in extremely special and important cases, and then only as a complete reversal of policy.

4. **Can a community, of a fire district or township, which is not an incorporated political subdivision secure any OCD equipment? If so, what and how much? And what procedure should it follow in order to get it?**

Under the legislation governing the distribution of OCD protective equipment such distribution is confined to "political subdivisions." Decision has been rendered that an unincorporated community is not a political subdivision, but it is nevertheless possible for such a community to obtain OCD protective equipment either by loan from an adjacent incorporated municipality or through an already established county OCD organization. The type and quantity of equipment so distributed depends upon its availability. As to the appropriate method by which such localities could obtain loans, it would appear that the appropriate approach would be through the County and State Defense Council in which it is located or by representation to the nearest adjacent municipality holding OCD equipment. No method is known whereby arrangements can be made for an unincorporated community to obtain complete accountability and control of such equipment.

5. **Where a municipality has been allotted equipment which for any reason it has been unable to put into service, but which it would like to retain and hopes at some time to make ready for use, will this equipment be taken from it?**

It will probably be removed. When the equipment was originally requested a

(*Continued on page* 448)

Fire Apparatus of the Wheeling, W. Va., Auxiliary Force Lined up for Inspection in Front of City Building. All Units are OCD Equipped.

# When are Firemen's Pensions Payable?

By LEO T. PARKER
Attorney-at-Law, Cincinnati, Ohio

IN this article we shall review late and leading higher court decisions involving all conceivable objections to firemen and their dependents receiving pension payments.

All readers should keep for future reference the herein cited higher court cases. This is so because knowledge of a modern decision to point may prove invaluable to you in event of future pension litigations.

## Broad Rule Applied

Frequently, the legal right of the retired fireman, or his dependents, to receive pension payments hinges on proof that his disability was directly related to his employment.

For illustration, in Brant v. Retirement Board of San Francisco, 135 Pac. (2d) 396, reported July, 1943, it was shown that a municipal fireman named Brant was forty-five years old at the time of his death, and that prior to January of 1937 he was a normal, healthy, athletic man. On January 11, 1937, on a cold day, in a driving rain, Brant was called upon to fight a fire which lasted over five hours. All of the firemen received a severe drenching. Nearly every man in the firehouse, within a short time after the fire, contracted a severe cold, and was compelled to take time off. Brant contracted such a cold, which, by January 15th, had developed into influenza and bronchial pneumonia. He was very ill for a period of twenty days with the penumonia attack. However, he recovered and did not die until ten months later, when he collapsed in the bathroom of his home with a cerebral hemorrhage. He died from that cause in the afternoon of that day.

The evidence proved that prior to getting out of bed on that morning Brant had a severe coughing spell, and that he had another spell after he went to the bathroom to shave.

Brant's widow applied for a pension on the contention that the fire of January 11th caused the penumonia, the pneumonia caused the death, and the cough caused the strain that resulted in the bursting of the blood vessel in Brant's brain that resulted in his death.

The higher court held in favor of the widow, and granted the pension.

## Pension Rights Not Vested

Modern higher courts consistently hold that the right to participate in a pension fund is not a vested right "per se." It is only when by the terms of the law providing for the fund, the claimant or widow of a fireman is entitled to receive a pension.

For illustration, in Arnold v. Browning, 171 S. W. (2d) 239, reported July, 1943, it was disclosed that a city fireman and his wife were divorced in 1917 and did not remarry until in 1935 after the fireman had retired on a pension. They then lived together until the fireman's death in 1941.

The legal question presented the court was whether the wife of the deceased fireman was entitled to a pension in view of a state law which precluded a widow from receiving benefits of the pension fund unless she was married to her deceased fireman husband at the time he was placed on the retirement list.

Since the fireman had been placed on the retirement list between the time of his divorce and the date of his re-marriage to his wife, the higher court refused to grant a pension to the widow and said:

"Some women have fallen into the vicious practice of seeking a living by the equivocal means of marrying a pensioner whose life expectancy seems to be short, thus attempting to render themselves eligible to the benefits of a widow's pension upon the death of their husbands . . . In the instant case, appellant (widow) did not acquire any right to the pension fund until the death of her husband in 1941, and the law in existence at that time controls the determination of the question. That law provides that she shall not be entitled to the benefits of the fund unless she was married to her deceased husband at the time he was placed on the retirement list."

## What Is Employment?

Modern higher courts hold that when a municipal fireman has arrived at the premises of his employer, and is thereon for the purpose of immediately commencing his actual work, he is performing service incidental to his employment. Moreover, in view of the policy of liberal construction in favor of the employe, a reasonable doubt as to what time an employe commenced his duties as an employe, and as to whether the hazard was one to which an employe was exposed by his employment, always is resolved in favor of the employe.

For instance, in Fireman's Fund Indemnity Company v. Industrial Accident Commission, 143 Pac. (2d) 104, reported January, 1944, it was disclosed that an employe was killed when struck by a shot gun blast fired at another person. The accident happened 30 minutes before the employe was supposed to start to work. However, since he was on his employer's premises when he was killed the higher court held that the dependents of the killed employe were entitled to receive compensation payments. This court said:

"The finding of the commission that the injury arose out of the employment is sustained by the evidence."

Also, see Board of Firemen's Pension v. Hyatt, 46 N. E. (2d) 595, where the higher court held that employes of a municipality who were not regular firemen were engaged in maintaining and repairing telephone and signal service and operating fire alarm system, auxiliary to actual fighting of fires were members of the city's "fire force." Also, this higher court held that they were entitled to participate to the Firemen's Pension Fund of the city.

## What Is Retirement?

Modern higher courts hold that the legal term "Retirement" is a separation from classified service. The absence from duty due to bodily disability, for example, may in itself constitute separation from the public service, and therefore be retirement.

For illustration, in McKenney v. Dobbratz, 51 H. E. (2d) 770, reported January, 1944, the question presented the higher court was whether a municipal fireman can continue as a member of the corporation known as The Boston Firemen's Relief Fund after he has been retired from the fire department for incapacity as the result of an accident occurring during the performance and within the scope of his duty.

In holding that the fireman was "retired," the higher court said:

"The issue is therefore narrowed to the question whether the petitioner continued to be a member of the fire department after his retirement for incapacity. We think that he did not. He was no longer obligated to perform any service as a fireman. He was in no way subject to the discipline of the department. He was out of the department as completely as was the fireman on leave of absence to serve as a soldier . . . Since the petitioner, when he was retired, ceased to be a member of the Boston fire department, he also automatically ceased to be a member of the Boston Firemen's Relief Fund."

Therefore, absence from duty due to bodily disability may in itself constitute separation from the public service. See Dunn v. Commissioner of Civil Service, 181 N. E. 794.

On the other hand, see the case of Acford v. Auditor of City of Cambridge, 300 Mass. 391. There the question was not whether the deceased fireman was still a member of the department after his retirement and before his death. The question was whether the widow of a fireman, who died in consequence of injuries received in the performance of his duty, should lose the benefits provided by a state law merely because the

deceased fireman had been retired in the interval after his injury and before his death.

It is interesting to observe that the higher court held that the widow was entitled to receive the benefits although, technically, the fireman was in retirement just previous to his death.

### Benefit Tax Law Valid

Frequently, it has been contended that general tax laws are void which raise revenues for pensions to disabled or retired firemen. However, it is interesting to observe that a modern court has held that firemen retirement benefits are *not* gratuities, nor for a private purpose. Furthermore, this higher court clearly held that such pensions serve a beneficient and useful *governmental* function, in its propensity, for stimulating and rewarding faithful public services in a hazardous employment.

For example, in Mayor v. Crichlow, 16 So. (2d) 749, reported March, 1944, a state law was litigated which requires that "it shall be the duty of the governing authorities of municipalities to create and maintain a fund known as 'Disability and relief fund for firemen and policemen.'" This state statute also provides that the fund must be created by an annual tax levy on private property of not more than one mill.

The legal question arose whether this tax provision of the law is valid. It was contended that taxation for the benefit of one "class" of individuals is void. However, the higher court held the law valid, and said:

"The imposition of a tax for the maintenance of this fund is not beyond legislative power nor does it constitute class legislation."

Although this decision was based upon the proposition that firemen perform "hazardous governmental" functions, yet modern courts consistently hold that municipal corporations engaged in a governmental function are not liable for any negligent acts of officials or employes. In other words, in the absence of a special state law no suit can be maintained against a city for the neglect of a public duty performed for the sole benefit of the public.

For illustration, in Reynolds v. City of Nashua, 35 Atl. (2d) 194, reported January, 1944, it was disclosed that a municipal employe sued to recover damages for injuries sustained when he was partially buried in a trench while working for the city as a common laborer. The trench was being dug to accommodate water lines for extension of certain fire hydrants. In holding the employe not entitled to recover damages, the higher court said:

"A governmental function does not lose its character by incidental advantages or economies developed in the work. . . . It is generally conceded that the fighting of fires and the *elimination of the fire hazard* is ordinarily a governmental duty."

### Validity of Bonus Upheld

When a city is governed by two sources of power, a municipal pension or bonus law is valid which is not contradictory.

For instance, in Astwood v. Cohen, 53 N. E. (2d) 358, reported March, 1944, it was shown that New York City, since January 1, 1938, has been governed by a short form Charter, setting forth the structure of the city government and the manner in which it is to operate. This was adopted by the voters of the city. Also, the city is controlled by an Administrative Code which was enacted by the state Legislature as a codification and restatement of existing laws "in harmony with and supplemental to the New York city charter."

The legal question arose whether a proposed payment of a bonus to city firemen was a local law amending the city charter which required approval of the voters, or whether it was within the Administrative Code not requiring approval of the voters. Since the proposed local law changed none of the provisions relating to salaries contained in the City Charter, the court held that approval of the voters need not be obtained, and said:

"Granting a salary bonus to city employes is quite unrelated to any provision of the New York City Charter. The Charter makes provision of law for fixing the compensation to be paid to city employes."

### State Law Controls

It is well settled that no municipal ordinance can add to, subtract from, modify or affect the provisions of a statute.

For illustration, in Kohler v. City of Kewanee, 53 N. E. (2d) 479, reported March, 1944, it was disclosed that seventeen firemen sued a city for the difference between the respective amounts paid them as salaries, and $150.00 per month prescribed by the Minimum Salaries State law. The legal question arose whether there should be distinctions between regular firemen and municipal officials, as chief of the fire department. Since the state laws specified no distinction, this higher court held:

"While there is ordinarily a distinction to be observed between officers and members of an organized body, the two Minimum Salaries statutes here involved make no such distinction, but, on the contrary, they include as members those who are ordinarily officers. We think the term 'member' of a regularly constituted fire or police department is broad enough to cover a member claiming as such, although he is an officer."

## San Francisco Firemen Win Wage Increase

On May 16 San Francisco voters approved proposed charter amendments, two of them affecting the Fire Department, when they went to the polls.

In supporting Amendment No. 4, the voters approved a $25 monthly raise for all hands for the duration and six months after. The proposition won handily although it was fought by such organizations as the Building Owners' and Managers' Association, the California Northern Hotel Association, the Down Town Association, the San Francisco Chamber of Commerce, the Junior Chamber of Commerce and the San Francisco Real Estate Board.

In a pamphlet opposing the raise, these organizations asserted the proposal violated "the National Stabilization program" and discriminated "against persons employed by private industry" but a counter-pamphlet gotten out by the Board of Supervisors pointed out that the men work for a maximum of $7.40 for a 12-hour day after six years of service and receive as low as $6.65 for the same period when they have less seniority.

The other amendement, No. 5, was backed by the Fire Commissioners who pleaded for additional manpower to be obtained by allowing firemen to work four of their regular days off a month (they get eight) for which they would get paid at straight time. This proposal was also approved and will be in effect for the duration and six months.

Both amendments became effective July 1.

BOB GREENOCK

**Tires Go Up in Smoke**

Hundreds of salvageable tires went up in smoke in Wall Township, New Jersey, while firemen hurriedly laid long lines of hose to reach the flames. Firemen from West Belmar, South Belmar and Belmar fought the fire for more than an hour, saving the majority of the tires.

# LEAKING CHLORINE CYLINDER PROVIDES MAJOR FIRST AID TEST

## New York Fire, Police and Hospital Departments and Disaster Units Participate

By Jerry Daly

LEAKING cylinder of chlorine gas in transit on a motor truck, gave New York City on the afternoon of June 1, its closest resemblance to what an enemy gas attack might be like. It happened in Flatbush avenue, Borough of Brooklyn, one of the heaviest traffic lanes in the metropolis which connects the Navy Yard and downtown shopping districts of Brooklyn with the Bowery and Canal street section of lower Manhattan.

Emergency Apparatus of the Fire, Police and Hospital Departments on the Scene to Treat Those Felled by the Chlorine Gas

Hundreds of persons were affected —some of them seriously. Scores of doctors and nurses aides from a dozen hospitals helped the victims. Police, fire, hospital and disaster relief units responded and gave valiant first aid with oxygen. There were no fatalities, but half a hundred of the victims required hospitalization for more than a week.

The motor truck conveying the gas was loaded that morning at one of the Standard Oil Co. plants in Bayonne, N. J. with twenty-seven cylinders of chlorine; two cylinders of freon and miscellaneous cylinders of mineral acids, including five cans of isopropynol. The cylinders stood in the truck which was covered excepting for the rear which had a hinged tailboard about two and a half feet high. The cylinders were lashed with rope to the side walls of the truck body.

The vehicle crossed under the Hudson River from Bayonne via Holland Tunnel; thence through the congested artery of Canal street to the Manhattan Bridge over the East River to Brooklyn. The chauffeur told authorities that he informed his employers by telephone after he left the Holland Tunnel that one of the cylinders was leaking. He asked for advice and was instructed to change his destination from an undisclosed pier where a United Nations vessel was taking on cargo for Colombia, South America, to a garage in the South Brooklyn section which is owned by his employer.

When the chauffeur had cleared the Manhattan Bridge, he asked a man on the sidewalk of Flatbush avenue to call the police. A police emergency truck responded. By now the fumes had taken charge of the neighborhood. Those who were able, went scurrying for shelter in stores, offices, factories, etc.—in fact any place where they could escape the fumes.

The first notice to the Fire Department came from the police. It was a request by telephone at 2.53 P. M. to send a fire engine to flush the pavement of Flatbush avenue. The Brooklyn fire alarm operator sounded a special signal 5-7-429 for the nearest engine and truck to respond to Box 429. This signal brought Chief Joseph F. Dunleavy of the 31st Battalion. He found the leaking cylinder standing in a waste paper receptacle which was perched on the sidewalk ventilator grating over the Myrtle avenue station of the BMT subway. Witnesses said that the cylinder had been lifted off the truck and placed in the waste paper can by some well intentioned policemen.

Chlorine fumes, two and a half times heavier than air, not only found their way into the subway through the ventilators in the sidewalk, but the fumes were drawn into the tubes by the suction of the trains. Chief Dunleavy called five public ambulances; also Rescue 2 at 3.05 P. M.; Ambulance No. 2 at 3.06 P. M. and Smoke Ejector No. 2 at 3.07 P. M. These signals brought Borough Chief Edward Conway in charge of Brooklyn; Asst. Chief John J. McCarthy in command of the department and Deputy Commissioner Harry M. Archer, M.D., as well as assorted attaches of the Bureau of Fire Prevention in charge of Acting Chief Walter Morris.

### Smoke Ejector Used

The huge suction of the smoke ejector was dropped into the subway station through a sidewalk hatch which firemen quickly made by removing a section of the ventilator grating. With capacity of 5000 cubic feet a minute, the ejector worked for an hour although the fumes had been dissipated sooner than that. Many of the victims were in the subway.

Inspectors of the Bureau of Combustibles of the Fire Department found in the floor of the leaking cylinder, at about one and half inches from the rim

Felled by Chlorine Gas

Huddled together on the pavement a group of sufferers, victims of chlorine gas fumes which were loosed when a truck dropped several cylinders receive first aid treatment.

or edge of the base, a hole about three-sixteenths of an inch. It was a ragged puncture, surrounded by rust and corrosion. The ICC reported that the cylinder had been tested and inspected in April this year. It was 66 inches high and nine inches in diameter and weighed about 150 pounds when filled.

Inspector Joseph Barbuto of the Fire Department served on the chauffeur and his employer a summons to Municipal Term of the City Magistrate's Court, charging them with violation of the Administrative Code of the City of New York, in that they allegedly transported through the streets of the city, a quantity of chlorine gas without a permit from the Fire Department. The truck had a State motor vehicle license; a public cart license and an Interstate Commerce Commission plate. But, the truck did not have, as required by the Fire Department for trucks engaged in such traffic: (1) a gas mask for the chauffeur; (2) danger or caution signs; (3) hose and spanners, and (4) a completely enclosed truck body to prevent the rays of the sun from reaching the cargo.

The owner and the driver of the truck were found guilty in Municipal Term of the City Magistrate's Court. The owner of the truck was fined $500 or the alternative of four months in jail. The driver was fined $200 or two months in jail. The money was paid almost immediately. The trial of the case was prosecuted by Fire Lieutenant Edward Thompson, head of the Legal Division of the Bureau of Fire Prevention.

Some indication of the lack of information on the part of the driver was gleaned from his admission that he had been driving commercial trucks for twenty-five years but did not know the meaning of the letters ICC on most of the trucks he drove. The trial lasted a couple of days and the proceedings were observed by two score lawers with interest in damage suits which have been brought on behalf of some of the victims.

# BRITAIN'S TRADE UNIONISTS BOOST NATIONALIZED SERVICES

## Want Present Set-up Continued After War, Without Too Much Centralization of Authority

By Herbert Tracey*

UNDER grim conditions of war Britain's fire fighting services have been completely revolutionized. One feature is the rise of a strong fire fighters' trade union with some 100,000 members. Looking to the future the Union is already framing plans for the post-war organization of a Fire Service, based on the principle of nationalized service—a principle which Britain's trade unionists expect to see applied to public services after the war.

### 1500 Separate Brigades Before War

Before the war, fire fighting services were under the control of the local public authorities. There were some 1,500 separate Fire Brigades. Each brigade worked within the territorial boundaries of the local authority controlling it. Conditions of service were by no means uniform as from one local authority to another and standards of equipment and training also varied. The Fire Brigades recruited a splendid body of men, may of them formerly police, but they were only weakly organized until the Fire Brigades' Union, active throughout the war, succeeded in unionizing the auxiliary fire fighters, who worked with the regular fire brigades.

During the intense air attacks on Britain, which began in 1940 the Government created the National Fire Service, bringing the regular Fire Brigades under the administration of the Home Secretary and Minister of Home Security—who, among other responsibilities is concerned with civil defence measures.

*Of Trade Union Congress of Great Britain.

The transformation of the 1,500 separate Fire Brigades and the auxiliary fire services into a unified and centralized National Fire Fighting Service was a remarkable feat of improvisation, and now the Fire Brigades' Union has produced a plan to maintain and develop this improvised organization as a permanent public service after the war.

The executive Council of the Union has framed its plan in the belief that the functions of the fire fighting service, after the war, will be different from the demands made upon it today. New fire fighting problems will arise, the Executive suggests, with the redistribution of industry after the war, the development of new industries, the extension of aerial transport, and the rebuilding of devastated areas. These developments in the post war structure of the country will bring with them changes in the system of local government. The problem which the Executive has set itself to solve is that of adapting fire services to the needs of the country, in such a way as to reconcile the principles of local and central administration.

The Union sets its face strongly against any suggestion that the new unified and centrally controlled Fire Service should after the war be transferred to the control of the 1,500 local authorities that managed the regular Fire Brigades in peacetime. The Home Secretary has given a categorical pledge that the Fire Brigades would go back to local government after the war, but he has also stated that the experiment of a National Fire Service had taught many lessons, and indicated that the Government was quite willing to think again about the question of restoring the pre-war system of separate Fire Brigades.

What the Union proposes is a method of organization which will free the Fire Fighting Service from what it regards as the drag on efficiency which they believe would result from every rural and urban district council maintaining its own Brigade. On the other hand, the Union does not want a rigorously controlled Fire Service under the administration of a Central Government Department like the Home Office. The most efficient scheme, the Union suggests, would be a Service controlled by elected representatives of local authorities, but one based on large territorial units. The individual local government authority as the basic unit of organization, the Union believes, must be abandoned. Much larger Fire Brigade areas must be established. Standardization of equipment has already been brought about. Improved fire fighting methods have been introduced. It will be necessary to maintain, for instance, the emergency communications, the additional water supplies, and the reserve of trained man-power developed during the war years. This means, a post-war scheme of large Fire Brigades covering the main centers of population and industry and stretching out, where necessary, to the urban and rural districts.

The Union's proposal in a nutshell is that the post-war Fire Service should be organized in large brigades, and controlled by a Committee representing the public authorities within the area, on the basis of their rateable value, reinforced by a standard rate over the area, and aided by a Government grant. The organ of central control should be a Central Advisory Council, on which the Union claims representation. It insists upon the necessity of maintaining the Inspectorate, also, under the control of the Home Office.

Integral to the Union's proposal for a nationalized Fire Service on these lines is its program covering wages and conditions in the Service. During the war working hours of Fire Fighters have, of course, been lengthened. But the Union proposes for the post-war Service a standard 48-hour week—with a reservation in respect of a three-shift system, equivalent to a 40-hour week, in accordance with the policy which the International Fire Fighters' Association is planning to secure in other countries, notably the United States and Canada.

The Union also claims a national minimum wage, at least comparable with the police scales of pay. The Service, in its view, should be regarded as a pensionable form of employment, suitable for men from the Armed Forces and Merchant Navy, used to long hours of duty; it also considers necessary to develop the training schools for Fire Fighters and the Service should aim at attracting a type of intelligent young man imbued with a ready sense of public service, and keen on an interesting but dangerous profession.

## Chief Samuel Jeffries Retires

Chief Samuel H. Jeffries has retired from the Wilkinsburg, Pa., Fire Department after thirty-five years service. Former Assistant Chief William M. Thomson has been appointed Chief to succeed him.

# FIRE PREVENTION AWARD WINNER HONORS FIREMEN FOR THEIR AID

## Hartford, Conn., Recognizes Work of Firemen By Providing Sleeve Insignia

HARTFORD, Conn., recently walked off with three national awards—two in the field of fire prevention and the other in the field of public health promotion.

Chief John C. King

Outstanding of the prizes was the grand award of the United States Chamber of Commerce given to the city for its fine 1943 record in the interchamber fire waste contest, which is dedicated to stimulating fire prevention action throughout the country.

Hartford took the grand award in competition with 600 cities, repeating its performance of 1940 when it captured the prize for the first time. In the two intervening years the city was given honorable mention.

### Awarded National Board Trophy

The National Board of Fire Underwriters' trophy, awarded annually to that city which wins the national chamber's grand award, also went to Hartford.. This city won the cup for the first time in 1940 and must win only once more to gain permanent possession of the trophy.

Finally came the American Public Health Association award, a place on the National Health Honor Roll for 1943 in recognition of the city's health promotion activities.

All three awards were presented at the annual meeting of the Hartford Chamber of Commerce at which tribute was paid to Executive Vice President William A. Dower and John Ashmead, Chairman of the local chamber's fire prevention committee, for their tireless efforts to bring the prizes to Hartford.

Preceding the annual meeting special ceremonies were held at which Hartford firemen became the first in the United States to receive individual sleeve chevrons as a reward for their part in bringing to the city first honors in the fire prevention contest. The chevrons were presented by the National Fire Waste Council.

George C. Long, Jr., president of Phoenix (Fire) Insurance Company, acting as chairman of the meeting, said winning of the awards was being celebrated not so much because it spelled victory in a competitive endeavor, but because the efforts put forth bring measureable returns in the conservation of human and economic values.

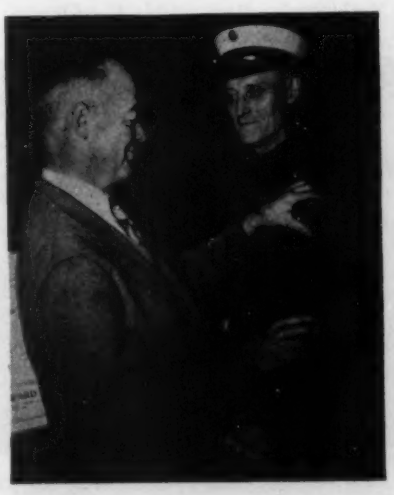
### 300 Fires Directly Hampered War Effort

That the loss in such values from fire alone can be tremendous was emphasized by Mr. Long who said one does not have to be an alarmist to be impressed with the far-reaching effect of such outbreaks. He recalled the heavy fire losses of 1942, estimated at $315,000,000 including nearly 300 blazes which, he said, directly hampered the war effort.

The insurance president said little comfort can be found in the present level of fire losses as he called attention to the harm being done the war effort by serious conflagrations throughout the country. Currently there is a continuing uptrend in fire losses at a rate which projects a total of $425,000,000 for 1944.

J. L. Madden, vice president of Metropolitan Life Insurance Company of New York, in presenting the grand award, said he hoped winning of the plaque would be an incentive to all to continue efforts to reduce further fire destruction.

While the nation can view with pride its accomplishments on the battle fronts and in the factories, Mr. Madden said it cannot view them with satisfaction until it has reduced the enormous toll of destruction and delays that preventable fires, illness, accidents and disability levy on the war effort and the national economy.



Percy Bugbee, Representing National Fire Waste Council Presents Sleeve Insignia to Captain Thomas J. Horan as Firemen Are Honored for Preventive Work

P. J. Berry, president of the Security Insurance Company of New Haven, in awarding the National Board of Fire Underwriters trophy, said that without a ceaseless flow of munitions the fighting forces could not now be winning notable victories all over the globe and without adequate fire prevention efforts these materials would not be flowing to the battle fronts.

The insurance executive said it is appropriate that this city should win the trophy because Hartford thereby sets an example for other cities of the country which, like it, are devoting most of their industrial capacity to the production of materials for war.

The National Board, he said, wished to express its appreciation for the splendid example which Hartford has set for other cities of the country at a time when fire defenses are of such paramount importance.

## Eastern Chiefs Meet

The Eastern Association of Fire Chiefs held its annual conference in Harrisburg, Pa., June 15 through 17. About 200 delegates attended the meetings which were held in the Penn Harris Hotel.

Newly elected officers include Assistant Chief Frank Dean, Lancaster, Pa., President; Chief William G. Wandras, Kearny, N. J., First Vice President; Chief John J. Tubridy, Buffalo, N. Y., Second Vice-President, Ex-Chief Charles E. Clark, State Fire Coordinator, Wayne, Pa., Secretary, and Ex-Chief George L. Mitchell, East Orange, N. J., Treasurer.

Papers presented at the conference included those by Chief Douglas Kropf, Director of Plant Protection, National Forge and Ordnance Company, Irvine, Pa., whose subject was "Meeting Oil Fire Problems;" by Fred Shepperd, Editor of FIRE ENGINEERING, New York, N. Y., on "Getting the Most Out of Your Pump Capacity;" by Major Percy W. Agrelius, Jr., Chief of Intelligence Section, Middletown Air Service Command, Middletown, Pa., on "Airplane Crash Fires;" by John J. T. Waldron, Assistant Chief, New York Fire Department on "Wanted—A Practical Fog Nozzle for Fire Fighting" and one by Arthur W. Espey, Adviser, Fire Training, Department of Public Education, Harrisburg, Pa., on "Fire School Training."

Demonstrations were held by the Cardox Corporation, DuGas Corporation, the All-Out Sales Service and by the WAC Fire Battalion attached to the U. S. Army Reservation at Indiantown Gap, Pa.

A visit to the State Capitol and to the Control Center of Pennsylvania's civilian defense set-up proved of interest to the delegates.

## Two Stations Closed

The Minneapolis city council last month permanently closed two fire stations and disbanded an additional engine company, reducing maximum personnel of the fire department from 502 to 475. When the current civil service list is exhausted, members of the regular force will be asked to work on their days off at the regular rate of pay.

# POST-WAR PLANS DISCUSSED AT NEW ENGLAND CHIEFS MEETING

## OCD Apparatus, Radio, Public Relations, Fire Alarm Systems Included in Comprehensive Program

AN attendance of nearly 500 marked the Twenty-Second Annual Conference of the New England Association of Fire Chiefs at the Balsams, Dixville Notch, N. H., June 27, 28 and 29.

The conference was opened by Chief M. W. Lawton, President. Following the Invocation by Rev. Michael Collins, Chaplain of the New England Association, addresses of welcome were given by representatives of Governor Blood of New Hampshire, Mayor Morin of Berlin, N. H., and Chief Anthony Malloy of Nashua, N. H., President, New Hampshire Fire Chiefs Association. Chief Samuel J. Pope of Boston, Mass., responded.

The memorial exercises concluded the opening morning session. The business sessions included the following speakers and topics:

"Lessons from the New Haven Fur Storage Fire," by Chief Paul P. Heinz, New Haven, Conn., Fire Department; "Detection of Sabotage and Arson," by Inspector J. J. McGuire, Federal Bureau of Investigation; "Use of OCD Fire Fighting Equipment," by Major L. S. Johnston, Office of Civilian Defense, Boston; "Safeguarding New Haven," motion pictures of the New Haven Fire Department; "Memories of the Past," motion pictures by Charles Madden, shown by courtesy of Chief Selden Allen, Brookline, Mass., Fire Department; "Selling the Fire Service after the War," by Chief Roi B. Woolley, Assistant Editor, FIRE ENGINEERING; "Problems to be Solved by the Fire Fighters of the Future," by Marshal Lauber, National Board of Fire Underwriters; "Post-War Planning," by Chief Selden R. Allen, Brookline, Mass.; "What to Expect New in Fire Alarm Systems," by F. B. Philbrick, President, the Gamewell Company, Newton, Mass.; "Arson and Its Investigation," by F. J. Allen, Special Agent, National Board of Fire Underwriters; "Radio in the Fire Service of Tomorrow," by Chief Charles H. French, Manchester, N. H., assisted by the New Hampshire State Forestry Department—a graphic demonstration of two-way radio communication including use of walkie-talkies; "Water Supply and Its Relation to Fire Fighting," by Percy C. Charnock, Assistant Manager New England Fire Insurance Rating Association; "Waterfront Protection by the U. S. Coast Guard," by Lt. William H. Clifford, U. S. Coast Guard.

At the banquet, at which Chief Selden Allen was Toastmaster, every lady was given a prize. Special entertainment was also provided for the ladies during the conference.

### Newly Elected Officers

The officers elected for the coming year were: President, Chief Allen F. Payson, Camden, Maine; First Vice President, Chief Frank J. Callahan, Central Falls, R. I.; Second Vice President, Chief Arthur W. Spring, Laconia, N. H. All other officers were re-elected, as follows: Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass.; Board of Directors, Chiefs Oliver T. Sanborn, Portland, Me.; Charles H. French, Manchester, N. H.; Alfred H. Koltonski, Rutland, Vt.; A. J. Cote, Woonsocket, R. I.; Stewart N. Potter, Greenwich, Conn., and Joseph E. Scanlon, Lynn, Mass.; also Sergeant-at-Arms, Chief Michael J. Shea, Fitchburg, Mass.; New England Director to the International, Chief Selden R. Allen, Brookline, Mass.; Chaplains, Reverend Michael F. Collins, Marblehead, Mass., and H. Chester Hoyt, S. T. D., Fairview, Holyoke, Mass.; Press Representatives, Harry Belknap, Brookline, Mass., and Vincent C. Stanley, West Newton, Mass.; and Official Photographer, Charles W. Madden, Aide to Chief, Brookline, Mass.

### Sympathy Message from Canadian Prime Minister

A letter of sympathy was recently received by Mrs. Agnes Taylor, Potsdam, N. Y., widow of Ralph I. Taylor who died on Feb. 10, 1944, from Prime Minister Mackenzie King of Canada. Mr. Taylor, past chief of the Potsdam fire department and Masonic leader, died in a Potsdam hospital several days after donating blood at a clinic sponsored by the Potsdam chapter of the American Red Cross in cooperation with Canadian officials of that organization.

In his letter the Prime Minister said: "No words from me at this time can lessen your great sense of loss. I hope, however, you may find consolation in the fact that your husband gave his life in the cause of freedom, for which both our countries are fighting side by side."

The Potsdam fire department which Mr. Taylor joined in 1925 and served as chief for two years drew up a memorial resolution.

The resolution follows in part:

"On February 10, 1944 Chief Taylor passed away, a victim on the altar of the God of War, as true as hero as ever made the supreme sacrifice on the field of battle. He died that someone might live. He died as he himself had lived, in the service of his countrymen, figuring neither cost nor consequence. He died in keeping with the highest traditions of the fire service.

"That 'Others Might Live.' Strip away all the heroics, forget the high sounding words, ignore the empty praise, silence the clang of bells and the wail of sirens, and you have the God-given command; the fireman's privilege to help those who can not help themselves, to succor those in needs, to aid the weak, the helpless and the dying; the fireman's motto, 'To serve others always—to live that others may live.'"

SANFORD D. DEWEY

**Officers of the New England Association of Fire Chiefs**

Front row left to right are: Chief Oliver T. Sanborn, Portland, Me., Director; Chief Joseph E. Scanlon, Lynn, Mass., Director; Chief A. J. Cote, Woonsocket, R. I., Director; Ex-Chief Michael W. Lawton, Middletown, Conn., Retiring President; Chief Arthur W. Spring, Laconia, N. H., Second Vice-President; Chief Allen F. Payson, Camden, Me., Newly Elected President; Chief Frank J. Callahan, Central Falls, R. I., First Vice-President; Chief John W. O'Hearn, Watertown, Mass., Secretary-Treasurer; Chief Michael J. Shea, Fitchburg, Mass., Sergeant-At-Arms; and Chief Alfred H. Koltonski, Rutland, Vt., Director.

In the back row left to right are: Chief Charles H. French, Manchester, N. H., Director; Chief Stuart Potter, Greenwich, Conn., Director; and Chief Selden R. Allen, Brookline, Mass., New England Director to the International.

# EFFICIENT FIRE FIGHTING SAVES ELEVATOR FOLLOWING EXPLOSION

## Use of Fog Checks Numerous Fires And Prevents Additional Blasts

ONE of the largest grain elevators in the City of Superior, Wis., had an explosion and a resulting fire which was attended by the Fire Department under the able leadership of Chief Olaf Sorenson. The construction of the building, the methods used in combatting the fire and other factors are of particular interest to fire fighters.

The elevator is situated on its own slip facing the St. Louis Bay front, and is the largest and highest steel elevator in the world. It was a well kept up structure and was as clean as this type of occupancy would allow as far as dust was concerned. Employees had been loading screenings into one of the bins when the blast came and from investigation after, the cause is problematical. The bins are of steel, and a piece of foreign metal in the screenings could have sparked the dust. However, the blast was of great intensity and the damaged section shown in the photograph is only a part of it. The photograph shows the south end of the elevator. Along the bin floor on both the east and west sides the currugated iron was blown out for distances of about seventy-five feet on one and 140 feet on the other.

### Control of Straight Streams Necessary

When the department arrived, nine men working on the bin floor were unreported. Fire department ambulances were immediately called. Smoke was pouring from the openings. The small passenger elevator was in order and some of the men were sent up in it. The rest were assigned as a ground crew. Arriving at the bin floor the firemen walked to the south end of the floor and found fire in every direction. Ropes, belts, cleaners, wood floors and catwalks were all involved. Using the small 1½-inch linen lines from the standpipes, water was directed on the big spots of fire. Coming up on the elevator, the men had agreed that absolute control of straight streams was in order. They succeeded in getting the bulk of the large fires out and then went after the small, smoldering spots. The blast had been violent and yet so fast that the thin layers of dust on the spouts and chutes had been set afire and lay smoldering without being disturbed.

The Coast Guard unit arrived and worked together with the fire department, used fine fog or spray nozzles. These were excellent for the purpose. They gave enough water to put out the smoldering spots without disturbing the dust. After clearing the small spots, the bins were then tackled. The floor had been raised over twenty-four bins to a height of twenty-four inches and all were smoking, some more than others. The department's 1½-inch lines were connected to the linen lines and, on the ends, fog units which were operating at a nozzle pressure of only 50 pounds, were attached and lowered into the bins. This had the effect of settling what dust was in suspension and finally quenching the smoldering grain and dust clinging to the metal supports bracing the bins about every twenty-five feet down. After working over each bin with the spray, a man was then lowered down into the bin. Using his spanner to anchor himself to the iron rung ladder, he manipulated the piped extender with the fog nozzle into every corner and crevice. The blast had even driven fire into scabbed joints in the joists holding the wood floor over the bin.

The fire department worked eight hours on the structure before they felt secure enough and then had men working for twelve more hours to be sure it was out. They were called back twice for small spots of fire that showed up in the bins.

### Water Loss Small

The water loss was small because the department used judgment in controlling the straight streams and also in converting to spray or fog nozzles when the bulk of the fire was out. The building was only sprinklered below the bins, and although the structure had steel supports, there was enough inflammable material in the floors, machinery, catwalks, belting and ropes to have had a serious loss had the fire gotten out of control.

The men previously unreported used the outside fire escape on the extreme north end of the building to get down, not trusting the passanger elevator. None was injured because none was in the immediate vicinity of the blast.

Looking back over the fire, Chief Sorenson had the following comments:

"This type structure with its steel frame, steel bins and corrugated iron fastened to the framework with small metal clasps is indeed a pop-off valve. Note in the photograph that it took the steel corrugated iron all around the one window without breaking a pane or removing the frame. Other windows were blown completely out frame and all.

"While fifty feet of attached linen hose can usually be depended upon to be long enough for incipient fires, in this case we had trouble. The first length broke and we had to take time out to connect another and then to add lengths as we fought the heavier fires.

### Fog Nozzles Ideal

"Fog nozzles or spray nozzles with the pipe extenders are ideal for use in this type of explosion. The necessity of such extreme care so as not to disturb the dust can be properly taken care with these nozzles. We used some of our small OCD pump tank extinguishers with the spread spray and they are excellent for wetting down smoldering dust. The hose should be at least thirty-five feet long for convenience in climbing around the spouts and catwalks. The explosion had wrecked the spouts and the spout leading to the bin that held the explosion was still spewing screenings over everything. We mixed spray with this dust and it must have helped because the second blast never came.

"I feel that every elevator or industry where they can be used should have fog nozzles, especially where our own equipment must be hauled up such a long way. The elevator used for passengers is too small to carry either men or equipment. The building which is 242 feet high is too high for using ropes and pulleys. The first fire fighting must be done with equipment on the floor where the fire is located. The equipment should have straight stream nozzles also, but a supplement of both extra lengths of bundled 1½-inch line and fog nozzles are extremely handy.

"In fires or explosions of this nature,

World's Tallest Grain Elevator After Explosion. Note How Sheet Metal Panels Were Blown Off, Venting the Force of the Blast

I know that we accomplished much by talking over our plans. After the large fires were out, the danger of the second blast was always with us until every spark was out. We walked carefully, never thudding the bin floor. We dropped nothing heavy and we used extreme caution in controlling our straight streams. I think too that a nozzle of the Bresnan revolving type, but with much smaller holes for dampening down the bins, is essential.

"If this blast had been in a concrete, or even solid wood structure, I feel that the first blast would have ripped it to destruction. The force of the blast having been diminished without going more than 150 feet into the elevator proper, allowed us to handle it more readily. Steel beams and iron ladders were twisted and bent; windows blasted out and a gaping hole more than forty feet high left in the south end of the elevator. The bin floor, scale floor and garner floors of the elevator all were lifted."

# LOADED GASOLINE TANK TRUCK CRASHES AND SPREADS FIRE

## Heavy Unit Overturned in Collision with Light Delivery Truck; Flowing Gasoline Carries Fire Down Street

A STOLEN car, driven at fifty miles an hour, rammed into the mid-section of a fifteen-ton truck loaded with 5,000 gallons of gasoline and overturned it, causing a thirty-foot wall of flame and searing a two-block residential section in Schenectady, New York, recently, as the gasoline flowed down the street.

Both vehicles concerned were burned to a crisp. As the big truck lay helpless on its back, its tank vents burst open and the gasoline gushed forth. A spark, apparently created by the intense friction, ignited the stream and in a space of seconds the area was an inferno.

A radio call for fire apparatus was sent into police headquarters at 6:29 a. m., nine minutes after the truck theft had been reported to police by the driver.

The tanker came to rest after breaking off a power company pole which threw out service to 4,000 homes and in the subsequent blaze more than a dozen power company and telephone poles were charred and lines snapped like so much twine.

### Gasoline Fumes Filled Area

Gasoline fumes, said firemen, filled the entire section, flared into billowing flames, scorching at least a dozen homes and killing vegetation over a large area. Rivers of flaming fuel poured down Union Street, from Wright Avenue to Central Parkway, and down that thoroughfare to Eastern Parkway, there to end in a spout of flame.

Union Street itself was blocked by two fiery walls of flame that shot at least thirty feet into the air, burning top branches of trees. The intense heat exploded sidewalks and granite curbing. Outer coverings of trees cracked and split; hedges were leveled and lawns destroyed, and the paint on nearby homes blistered. Fragments from the exploding sidewalks and curbs showered the area like shrapnel.

Residents, startled out of sleep by the terrific collision and the subsequent series of explosions, as well as the dense clouds of smoke and the brilliant, flickering onrush of the flames down Union Street, were forced back into their homes. Windows in at least a dozen homes cracked under the blast of the heat and in one of the homes heavy plate glass windows in the front door split under the strain.

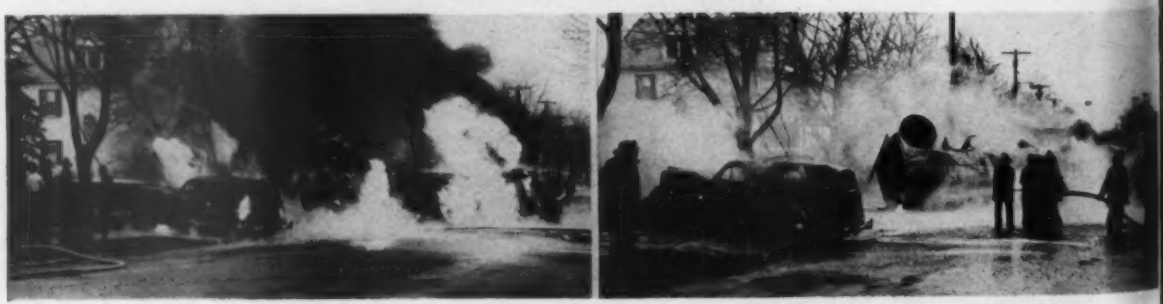
Several fire companies, led by Chief James J. Higgins and Deputy Chiefs Edward Moffett and William Arndt, responded and laid several thousand feet of hose. Deputy Chief Charles Thomas was ordered to the scene later to relieve other officers annd to maintain a safety area, which, covered with fuel, was in a highly inflammable state. Even after the truck fire was extinguished fuel dripped from the truck and was caught in pails. Sand was spread around the area and smokers were told to put out their cigarettes.

### Extreme Caution Taken

At the opening stage of the fire, the flames proved their difficulty. Firemen were faced with the fact that if they poured water on the truck or the flaming streams, the fire would spread. So they concentrated on using foam.

Both the driver of the stolen car and the driver of the gasoline tank truck escaped injury, the former being pulled to safety by a policeman.

The Cab of the Tank Truck as It Lay in the Road Being Consumed by the Intense Blaze



Scenes at the Spectacular Fire Caused When an Overturned Gasoline Truck Spilled Flaming Fuel for Blocks

# FIRE SERVICE GETS RADIO UNDER REVISED FCC RULES

## Not Necessary to be Operated in Conjunction with Police Departments

DATED May 9, 1944 the Federal Communications Committee released "Report No. 84—Rules and Regulations" amending the Rules Governing the Emergency Radio Service, particularly the section pertaining to the operation of the "Municipal Fire Stations."

The new regulations, which will become effective forty-five days from May 9, 1944, will make it possible for fire departments to acquire a license and operate their own independent emergency radio stations.

At present, because of the limited number of frequencies available, these stations will be restricted to cities with populations of 150,000 and up. However, the smaller communities are not entirely out of the picture because the way is held open to them to function on a county basis by establishing co-ordinated service under the Mutual Aid System.

"This action of the Commission," says the Special Bulletin* issued by the International Association of Fire Chiefs, "is a distinct forward step in procuring for the Fire Service its own independent short-wave radio. These frequencies will serve as a necessary stop-gap until the post-war period, when it is believed additional frequencies will be available and the population restrictions lowered."

Municipalities within the classification set forth by the Commission can now proceed to file their applications, which will be processed by the Commission.

According to the 1940 Census, the ruling directly affects fifty-six cities, only a scant few of which have their own frequencies for handling fire communications, independent of the police.

This decision of the Commission may be considered a direct accomplishment of the work of the Committees on Communications of the International Association of Fire Chiefs (Chief Roi B. Woolley, Chairman) and the International Municipal Signal Association (Herbert E. Friede, Controller of Communications, District of Columbia, Chairman). Both these chairmen serve on the Radio Technical Planning Board, Panel 13, the body through which recommendations for post-war emergency radio will reach the FCC.

*A limited number of bulletins containing copies of the Commission's report are available at Headquarters Office of the International Association of Fire Chiefs, 24 West 40th Street, New York 18, N. Y.

## Pyromania and War Cause Rise in Incendiary Fires

There has been a distinct increase in the type of incendiary fires due to pyromaniacs and to youthful persons affected by the unsettled wartime conditions, it is stated in the annual report prepared by the Committee on Incendiarism and Arson of the National Board of Fire Underwriters, covering the period to April 30, 1944.

As was the case during the previous twelve months, the Board's arson investigators found no enemy-directed sabotage by fire in any of their country-wide operations. However, there have been incendiary fires directly attributable to war conditions, they discovered.

"For instance," the report states, "fires have occurred in a meat packing plant ordered closed for violation of OPA regulations, in small grocery stores, filling stations and roadhouses whose proprietors have had to respond to calls of Selective Service or whose businesses have been lessened seriously by the restrictions on gasoline and tires. In one case, in the Middle West, which possibly may be regarded as a warning of future conditions, a serious fire of incendiary origin doubtless was due to a change in the rulings of the War Production Board with reference to the use of restricted materials, which made obsolete the type of manufacture employed by the concern in question."

During the period covered by the report, the Board's arson investigators reported on 2,012 fires of suspicious origin. They cooperated with public officials in arson investigations which resulted in 594 arrests. There were 429 convictions for arson during the year, and only 32 acquittals, the report stated.

The Committee believes the increase in incendiary fires during the past year is due in large part, if not entirely, to the effect upon young people of the unusual conditions surrounding the war and not to any increase in fires set for financial gain, which it is thought have remained at a low point.

This desirable fact is due in large part to the favorable economic conditions existing countrywide, but it is the belief of the Committee that the continuous work of prosecuting attorneys, fire marshals, police officials, sheriffs and others charged with the responsibility for the investigation of incendiary fires and the prosecution of persons responsible for them has also been effective.

The Committee holds the belief that when the war is over and if economic conditions become less favorable, fires set for profit will increase in number.

Delegates to the annual Fire School held at the University of Connecticut, Storrs, Conn., the week of June 5.

## Hotel Fire Kills One

One man was killed and 100 others barely escaped with their lives May 3 when the five-story Hotel Modesto in Modesto, Calif. was swept by fire which did more than $400,000 damage.

**A Sailor Lost His Life When Fire Swept the Five-Story Hotel Modesto, Doing More Than $400,000 Damage**

Henry Crow, owner of the hotel, said the fire started in the basement of a paint store occupying a part of the street floor and spread rapidly up the stair and elevator wells.

The dead man, Andrew A. Slaughter, cook, 3c, USN, from the Crow's Landing Auxiliary Naval Air Training Station, was killed when he missed his footing while attempting to step from a fifty story window onto a ladder hoisted by firemen and fell to the pavement.

Scores of persons were carried down ladders and a half dozen jumped into nets held by firemen. Four firemen were overcome by smoke but recovered after first aid treatment.

During the height of the blaze, firemen had a narrow escape when the street wall collapsed.

A high wind drove sparks into other sections of town, setting seven other roof fires within a radius of eight blocks. Firemen and apparatus from seven nearby communities came to the aid of the Modesto department.

—Bob Greenock

## Flameproofing of Wood Discussed

Flameproofing of wood was the main theme of discussion when the American Wood-Preservers' Association held its fortieth annual convention in Chicago recently.

In order to approach the industry's entry into fireproofing from several angles, A.W.P.A. arranged for reports from the Navy, largest wartime user of flameproofed wood (in its giant blimp hangars), and from Underwriters' Laboratories, Inc., as well as from producers of flameproofed material.

Carrying on the scrutiny of flameproofed wood, A. J. Steiner, Protection Engineer, Underwriters' Laboratories, Inc., discussed the evaluation of various types of fireproofed lumber from the standpoint of fire-resistance classification by protection engineers. Steiner pointed out that wood is one of the most useful materials in building construction and in some cases will provide fire resistance for greater periods than necessary.

"But considerable concern as to its fire hazard has been indicated, and in some cases the wood has been processed by impregnation or surface treatment in the hope of reducing the fire hazard," Steiner said. "The difficulty in establishing the acceptance of fireproofed wood appears to be that both the fire-resistance and the fire-hazard properties have been considered simultaneously in the past," Steiner continued. "Materials such as metal, cement, brick, treated or untreated wood do not have fire resistance, but **structures** assembled from them may have good or poor fire resistance . . ."

Continuing his thesis that fire resistance must be rated on a basis of actual performance, Steiner maintained that most samples used for testing are too small to provide dependable information as to the effectiveness of various treatments. But in the fire hazard test—the method developed by Underwriters' Laboratories—actual performance conditions are established. Test surface for this method is 20 inches wide and 25 feet long and so provides sufficient surface to develop variations in performance which may be due to cracking and splitting of wood or to variations in carbonized surface, depending on the depth of penetration of the treatment and its effect on different species of lumber.

Under Steiner's method of testing where conditions simulate actual performance—and by ratings approved by Underwriters'—certain species of lumber impregnated with approximately three pounds of high grade fire retardants per cubic foot are rated as having about two-thirds less fuel-contribution and flame-spread than untreated wood. With higher retentions, the fire hazard is reduced even more, approaching the incombustible rating.

The treating of plywood for resistance to fire, as well as to decay and termites, was another point of discussion at the meeting. Wood technologists and industry specialists at the convention told members that 7-ply and 9-ply material is being successfully treated after lamination—with full penetration throughout the plies.

## Helicopter Used in Fighting Trestle Fire

Fighting railway fires is the newest use of the versatile helicopter, invention of Igor Sigorsky of Bridgeport, Conn. In a recent announcement made by the U. S. Coast Guard, a helicopter from its base at Floyd Bennett Field assisted Long Island firemen from Rockaway and Howard beaches in extinguishing a blaze of ties on a Long Island Railroad trestle south of Broad Channel over Jamaica Bay.

Loval fire units were attacking the fire but were having difficulty reaching it with their apparatus. A helicopter commanded by Lt. Commdr. W. J. Lawrence, Coast Guard Flight Officer, with Lieut. (jg) E. Graham aboard, noticed the plight of the firemen from the air.

Hovering over the blazing trestle, the helicopter lowered hand extinguishers to the firefighters, enabling them to keep the blaze under control until adequate apparatus could be maneuvered into position.

The fire took place on the main line of the Long Island Railroad for the Rockaway section, which serves the commuting traffic from that area.

Thomas F. Magner

## Fire Headquarters Burns

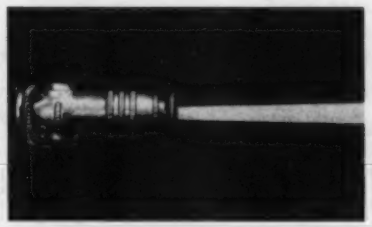
Memphis, Mich., lost its fire headquarters and equipment, including the pumper, hose, ladders and chemical apparatus when fire destroyed the building in which it was housed. Chief Merle Clark said the fire was of unknown origin and the loss would be in excess of $15,000. The town was without fire equipment so the fire laddies of neighboring Richmond got busy and sent over some hose and a pipe so that some protection could be had by the residents.

**Charter Members of the Illinois Fire School**

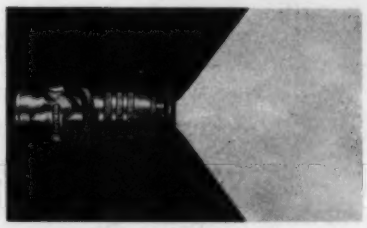
The Illinois Fire School, held at Champaign, Illinois, on June 6 to 9, celebrated its twentieth anniversary. The men in the photograph were members of the original school. Left to right in the top row are Hobart Kruse, Champaign; Charles Mattsen, Moline; Fred Haderlein, Carlyle; Joe Valentine, Rock Island, and Chief Roy Alsip, Champaign. In the bottom row from left to right are Tom Brooks, Clinton; Louis Reich, Riverdale; Professor L. H. Provine, Champaign; Connie Nicol, Sterling; and Harry K. Rogers, Chicago.

# With *This* One Nozzle You Can Turn

*from* **solid stream** —with or without fog or water curtain.



*to* **130° water curtain** —with or without solid stream.



*or* **fog** —of any degree, with or without solid stream.

## Quicker than the Chief Can Bark an Order!

See how easily it works. With the lever at "open" position (as illustrated at top and in picture above left) you get a solid stream. With this solid stream you may also have fog of any degree up to a 130 degree water curtain, if desired, simply by twisting the knurled top of the nozzle; and it twists as easily, and even more quickly than a common garden hose nozzle—1⅛ turns from shut-off to 130° Water curtain.

**REDUCE LOSSES • INCREASE SAFETY**

With the lever at closed position (see illustration just above) you cut off the solid stream and then you have your choice of fog of any degree, up to the 130 degree water curtain. If you want solid stream again just throw the lever back into "open" position. This amazing nozzle, with a six-year record of efficient performance, is of all bronze construction, machined to utmost accuracy.

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**or Any Combination**
**with**

*The* **UNIVERSAL NOZZLE**

**USED BY** { U. S. Navy and U. S. Army air stations, U. S. Coast Guard vessels, scores of industries, and municipal fire departments.

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WHEN Republic Fire Hose has been protected with Republic's exclusive Provar Process, it is always ready for use. This treatment defies the destructive effects of mildew and rot, assuring longer service life and constant readiness for protection of life and property. Specify Republic Fire Hose with Provar Process mildew resistance.

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DIVISION OF
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## Large Lumber Yard Destroyed by Fire

Fire, which caused the FBI to launch an immediate investigation, on June 3 completely destroyed one of the West's largest lumber yards when it swept through the yard and plant of the Redwood Manufacturing Company at Pittsburg, Calif.

Although the blaze was brought under control in five hours by nearly 400 fire fighters from half a dozen nearby towns, fire still smoldered stubbornly in the stacks of burned lumber and piled sawdust of the 100-acre area, blackened in one of the Bay Region's greatest industrial fires of recent years.

Firemen and apparatus from Pittsburg, Walnut Creek, Martinez, Concord, Port Chicago and Antioch, responding to calls for help, were aided by a Coast Guard fireboat dispatched by orders of Lt. O. S. Peterson, chief of the Coast Guard Fire Battalion with headquarters in San Francisco, and 300 men and six pieces of apparatus from Camp Stoneman.

The fire threatened the nearby Columbia Steel Company plant, the plant operated by the Dow Chemical Company and the Pittsburg Barrelling Company plant of the Union Oil Company whose tanks were filled with vital fuel oil.

Four times sparks ignited buildings in the steel company yard and four times units of fire fighters extinguished them. As more and more companies joined the fight, the limited water supply handicapped the fire fighters and several mains went dry. However, lines were relayed from the Coast Guard fireboat to the pumpers but when it became apparent the combined fire fighting forces could not subdue the wind-swept flames, streams were concentrated on keeping the flames within the confines of the doomed plant.

Only one out of more than a dozen buildings was saved and virtually all tools, irreplaceable without priorities, were destroyed.

The fire was discovered by a truckman and his helper shortly after 7 p.m. The flames at that time were eating at the sash and door factory and by the time first companies arrived, had spread rapidly, whipped by the wind, in all directions.

Civilian Defense organizations put their mobilization plan into effect, bringing a good supply of manpower, a factor that saved other plants. Attempts were made to save loads of processed lumber by hitching horses to the track dollies but the efforts were only partially successful.

The yards contained more than eight million feet of lumber, valued at more than $400,000 and the plant was well over two million dollars, according to Superintendent Michael Mulcahy.

The plant was supplying wood to a number of war industries, one reason the FBI was called in.

Only one fireman was injured in the blaze and he returned to duty later after receiving first aid.

BOB GREENOCK

Scene at the Fire Which Destroyed the Redwood Manufacturing Company's Plant in Pittsburg, Cal.

## New Mexico Firemen Meet

At the annual convention of the New Mexico State Firemen's Association, held in Raton on June 12-14, the following were elected to office:

Chief Tom F. Bonner, Ft. Sumner, President; Chief F. B. Macatee, Lovington, Vice President; Chief Neil C Haynes, Camp Luna, Las Vegas, Vice President; Chief W. D. Moore, Raton, Vice President; and Theodore A. Rosenwald, Albuquerque, Secretary-Treasurer.

The meeting which was held in connection with the annual fire college of the Association included papers by Chief J. Ray Pence, Stillwater, Okla., on "Extinguishing Butane and Propane Fires"; by W. C. Anderson, of the War Production Board, Albuquerque, on "How Fire Departments Can Get Essential Equipment; by Henry A. Gonzales, Acting State Supervisor of Trade and Industrial Education, Santa Fe, on "The Importance of Fire Service Training during a War Emergency"; and by D. G. Mulligan, Engineer, Mountain States Inspection Bureau, Denver, Colo., on "Testing Hose and Equipment."

The session on June 13 included papers by Chief Harry K. Rogers, Fire Prevention Department, Western Actuarial Bureau, Chicago, Ill., on "Evacuation or Panic"; by James E. Bone, District Safety Engineer, U. S. Engineer Office, Albuquerque, on "Fire Safety in Construction"; by N. V. Tanner, Associate Engineer, Department of Public Health, Santa Fe, on "Liquefied Petroleum Gas Regulations"; and one by J. E. Taplin, Fire Department Instructor, Eighth Service Command, Dallas, Texas, on "How Municipal Fire Departments Can Adapt Present Equipment to Emergency Control of Crash Fires."

In addition, several demonstrations including small hose equipment, training evolutions, crash fire fighting equipment, first aid, salvage, and a fire demonstration were held.

Several discussions on the control of petroleum fires and fire department gadgets were also held.

**Fire Fan A. Hardy**

"Smoke Stack" Hardy, Baltimore fire fan extraordinary, is shown on watch in his "fire Station."

## Scholarships Given in Fire Protection Engineering

Four 1944 high school graduates, all members of June classes of Chicago High schools, have been given scholarships in fire protection engineering.

The four are winners in Illinois Institute of Technology's annual fire protection engineering scholarship contest. Each receives a four-year fire protection scholarship to Illinois Tech. The scholarships, awarded on the basis of competitive examinations, are given annually by the capital stock companies through the Western Actuarial Bureau.

The winners are William Andrle, Robert Fawcett, Henry Kudenholdt and Race Wilt.

Illinois Tech's department of fire protection engineering, the only one of its kind in the nation, was established in 1903. Although the Institute has graduated more than 400 fire protection engineers since that date, the supply has never met the demand for graduates.

Interior of Vanden Berg Furniture Store, Grand Rapids, Mich., After Fire

## Grand Rapids Has Two Large Fires

Two fires of undetermined origin caused $135,000 damage and kept Grand Rapids, Mich., firemen busy on Memorial Day. Starting at 1:44 a.m., an alarm was telephoned in calling the fire department to the Vanden Berg Furniture store. On arrival of the first companies, the fire was found to be in progress in the finishing room on the main floor, from where it spread rapidly to the rug and floor covering department. As the fire engine started to stretch, the large plate glass windows in the front of the store were blown out by a terrific explosion.

A second alarm was immediately transmitted by Chief Stone, the first superior officer to arrive, bringing in two additional pumpers. According to Battalion Chief Adolph Nelson, the fire spread swiftly, eating its way through the first and second floors and within a matter of minutes had broken through the roof. Fire Marshal Edward C. Palmer and Assistant Marshal Burns responded on the second alarm. A third was then pulled bringing in additional pumpers, another aerial truck and a hose wagon. Six special calls for additional equipment were sent in between 1:44 a. m. and 3:15 a. m. bringing in a total of twelve pumpers, one hose wagon, two aerial trucks and one service truck.

The building was surrounded with heavy streams, aerial lines, deluge sets and many hand lines and was brought under control two hours after the alarm was turned in. However the blaze was fought for seven hours.

A large burst of flying embers filled the sky when the roof caved in, and were carried a considerable distance by a brisk southeast wind, setting several smaller fires, which were extinguished promptly.

At the peak of the fire the auxiliary firemen, under command of auxiliary fire chief Allen Marzolf, were called out. Approximately forty men responded and they did good work, patrolling the surrounding area, extinguishing smaller fires and assisting in the fighting of the main fire.

The city pumping station started up two 5,000,000 gallon booster pumps which fed a 12-inch high pressure main on Grandville Avenue from which the hydrants were fed. Adequate water of good pressure was thus provided at the vicinity of the fire.

The damage to the furniture store was in excess of $100,000.

At 5:15 p. m. of the same day an alarm was turned in for a fire at the Grand Rapids Lumber Company at 47 Scribner Street N. W. A large shed in which building material of all types was stored was a mass of flames when the first alarm companies responded. The fire was spreading rapidly to lumber piles in the yard so firemen immediately put their lines in operation between the burning shed and the lumber piles in an effort to head off the spread of the flames.

The first alarm brought out three pumpers and one aerial ladder company, but the fire had gained such headway that more help and equipment were needed. Three additional alarms were turned in bringing in a total of eight pumpers and two aerial trucks.

The auxiliary firemen were again called out, responding in force and gave effective assistance.

The blaze was brought under control by the use of deluge sets and hand lines at about 6:30 p. m. although it was some time before the fire was actually out.

The cause of the fire has not been determined. The damage has been estimated between $35,000 to $40,000.

MAX O. LEE

## Fire Caused by Defective Wiring

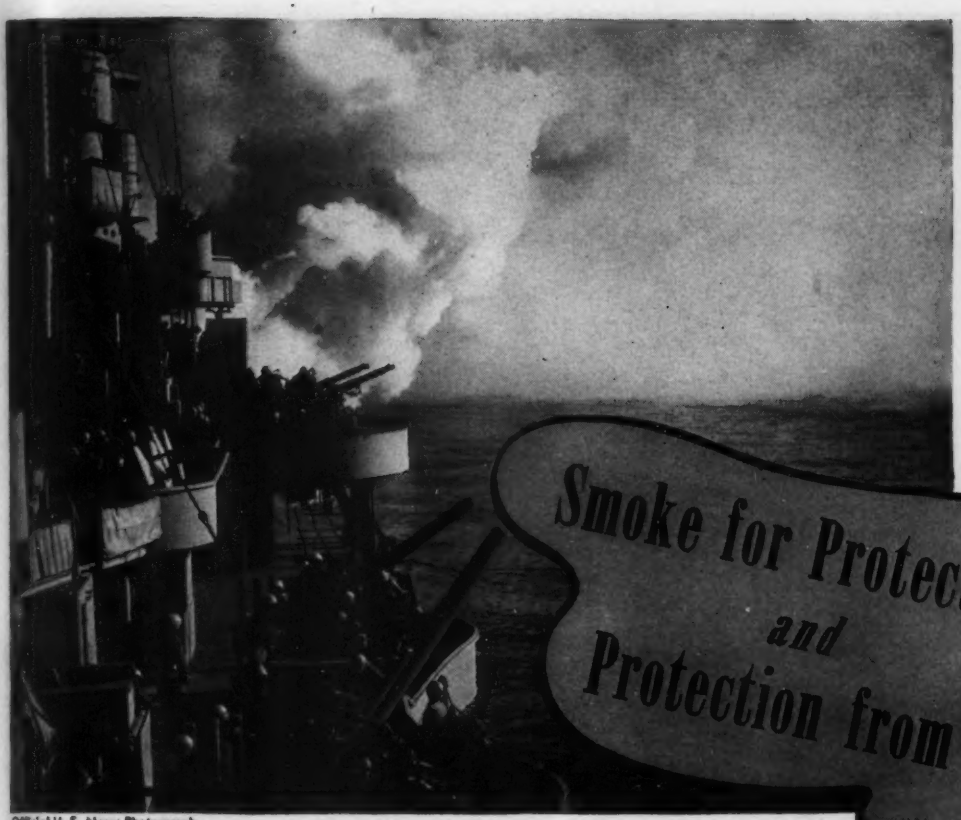
Defective wiring caused a $10,000 fire which levelled two large barns owned by Charles Spalisbury in Redwood, N. Y., on May 28. Two seven-year-old horses perished in the flames.

Occupants of six other buildings, all within a radius of several hundred feet from the barns, were forced to leave their homes. Redwood volunteer firemen brought the blaze under control after an hour's battle.

SANFORD D. DEWEY

Eleven Business Firms Wiped Out in This Fire

The fifth in a series of major fires to strike Oroville, Cal., in the past eighteen months occurred on May 25, destroying half a city block and wiping out eleven business firms. About $100,000 damage was done in this fire. Like the others, it is believed to be the work of a firebug.



Official U. S. Navy Photograph

# Smoke for Protection and Protection from Smoke

HERE the USS Philadelphia is shown weaving a veil of smoke to protect ships anchored in a beachhead bay.

The USS Philadelphia and all Navy combat ships are adequately equipped to eliminate smoke by extinguishing fire should it start on shipboard. With the appearance of the first curl of smoke or tongue of flame, the fire fighting equipment is available for instant use. This efficient U. S. Navy fire protection is saving many lives and valuable ships in the daily naval encounters of this World War.

The U. S. Navy has adopted National Foams and is using them extensively, especially to combat oil and other particularly hazardous fires on land and sea. National Foams are used by most oil refineries and by other important industries.

Our engineers will gladly consult with you and advise regarding type of equipment which will most effectively meet your needs.

## IN FIRE DEPARTMENT SERVICE

National Foam System has equipment especially designed for the use of Fire Departments to meet all types of fire fighting requirements. Complete engineering service available.

The experience of our engineering department is at your service.

# NATIONAL FOAM SYSTEM, INC.

Specializing in Foam Fire Protection

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# *If these Hands fail...*

If disaster should befall your watchman...illness, accident, attack by intruders—if he is incapacitated from *any* cause whatever...the unseen hands of A.D.T. Watchman's Reporting Service go into action immediately...to investigate, to furnish assistance and to restore orderly patrols of your premises.

When your watchman or any other employee on isolated duty "rings in" to an A.D.T. Central Station he is under the constant watchfulness of an organization which checks his performance throughout his period of duty and stands ready to help him in any emergency. A.D.T. also provides manual fire alarm boxes within the premises to summon fire-fighting forces quickly and accurately.

This and other A.D.T. Protection Services provide assurance of continuous and unfailing protection in thousands of plants throughout the country, including many of the nation's most important war industries. Plant executives, property owners, insurance men, police and fire department members and all protection experts enthusiastically endorse A.D.T. for its exceptional value in guarding against fire, intrusion, burglary, holdup and other crippling hazards.

Write now for our illustrated booklet..."On the Alert"...describing A.D.T. Watchman's Reporting and Manual Fire Alarm Service. It's full of valuable protection details.

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CENTRAL STATION OFFICES IN ALL PRINCIPAL CITIES OF THE UNITED STATES

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*Electric Protection Services*

AGAINST FIRE · BURGLARY · HOLDUP

A NATION-WIDE ORGANIZATION

## Manufacturers' Announcements

### Clay Baird Dies

Clay M. Baird, founder and President of Bi-Lateral Fire Hose Company, of Chicago, Ill., died on June 27, at his home in Evanston, Ill. He was eighty-seven years old. Mr. Baird, who was born near Milton, Ohio, is survived by two daughters, a son, twelve grandchildren and ten great-grandchilldren.

### Portable Floodlight and Searchlight Units

Lister-Blackstone, Inc., of 1706 South 68th Street, Milwaukee, Wis., are the manufacturers of a portable floodlight unit, called the Nite-Hawk. Four 1000-watt wide-angle floodlights, one on each corner, cast powerful beams in the same or different directions. Each light is individually operated from a control panel and is adjustable up and down, and in all directions. The lights may be raised to a height of 8½ feet and swung in a 180 degree vertical arc.

The Nite-Hawk may be obtained with two 30,000 candle power floodlights and a seven million candle power searchlight. It has an effective lighting range of one mile.

In addition to providing light, the Nite-Hawk has a control panel with receptacles for operating small Universal hand tools, such as electric drills, saws and hammers. Disconnect fittings in each floodlight cable provide additional power outlets.

Power is supplied by an air-cooled 4-cylinder engine, equipped with an electric starter. A 5000-watt self-regulating A. C. generator, connected to the engine, delivers direct current at 110 to 120 volts, the voltage being adjustable by means of a rheostat located on the control panel.

The Nite-Hawk is mounted on heavy-duty, multiple-leaf steel springs with two taper roller bearing equipped all-steel wheels. Pneumatic tires will be supplied on war orders only if the requirements necessary for securing them are met. A retractable steel caster wheel provides support for the towing end when the Nite-Hawk is parked. They are also available without running gear for truck mounting.

### Stark Mills Plant Awarded Army-Navy "E"

The Stark Mills plant of the United States Rubber Company at Hogansville, Ga., which spins yarns for bullet-sealing hose, hydraulic brake hose and fire hose received the Army-Navy "E" award on June 20. The ceremonies were held on the plant grounds.

Colonel Francis J. Heraty, assistant director of Officer Candidate School, Fort Benning, represented Under-Secretary of War Robert P. Patterson in presenting the "E" flag to the plant. Commander William Waldron White, commanding Atlanta Naval Air Base, represented the Navy.

Stark Mills also manufactures tire cord, weaves Asbeston and turns out Usiex yarn for the webbing of parachutes. The plant employs 1,000. It became part of the United States Rubber Company in 1931.

### Recent Sales of Seagrave Apparatus

The Sales Department of the Seagrave Corporation, Columbus, Ohio, has announced recent deliveries of Seagrave fire apparatus to the following cities: Mansfield, Ohio; Santa Ana, Cal.; Texarkana, Ark.; Birmingham, Ala.; Methuen, Mass.; Akron, Ohio; Orange, Tex.; New Haven, Conn.; Lawton, Okla.; Dayton, Ky.; Manchester, N. H.; St. Louis, Mo.; Moline, Ill.; Council Bluffs, Ia.; and Bryn Mawr, Wash.

This year the Seagrave Corporation celebrates its sixty-third anniversary as manufacturers of fire apparatus. In those sixty-three years Seagrave has developed many of the features that have helped to make the job of fire fighting more efficient. A few of these developments have been the centrifugal pump for fire apparatus, enclosed pumping units, automatic pressure regulator, self-contained auxiliary cooler for pumping engines, all steel aerial ladders, hydraulic aerial ladder control mechanism, all steel canopy cabs.

### Col. J. R. Hubbard with Great American Industries

Great American Industries, Inc., has appointed Colonel J. R. Hubbard office manager of its New York offices at 247 Park Avenue.

Colonel Hubbard was retired from the Army on January 15, 1944, after forty-one years' service in the Quartermasters Corps.

### New Seagrave Sales Representative for Iowa

The Herman M. Brown Company of Des Moines has been appointed by the Seagrave Corporation as their sales representative for the entire state of Iowa. This company is very well known throughout the "tall corn state" and both the Seagrave Corporation and Mr. Brown are to be congratulated upon this business affiliation.

### Changes in Chicago District of Boston Woven Hose & Rubber Co.

Mr. John H. Rowe, who for the past several years has been Chicago Manager, has been made Vice-President in Charge of Western Sales, covering the territory from Chicago to the Pacific Coast.

As of August 1, Mr. Stuart A. Guild will become Manager of the Chicago office. Mr. Guild has been in charge of the Connecticut, Rhode Island and Western Massachusetts territory.

### Ex-Chief Scully Dead

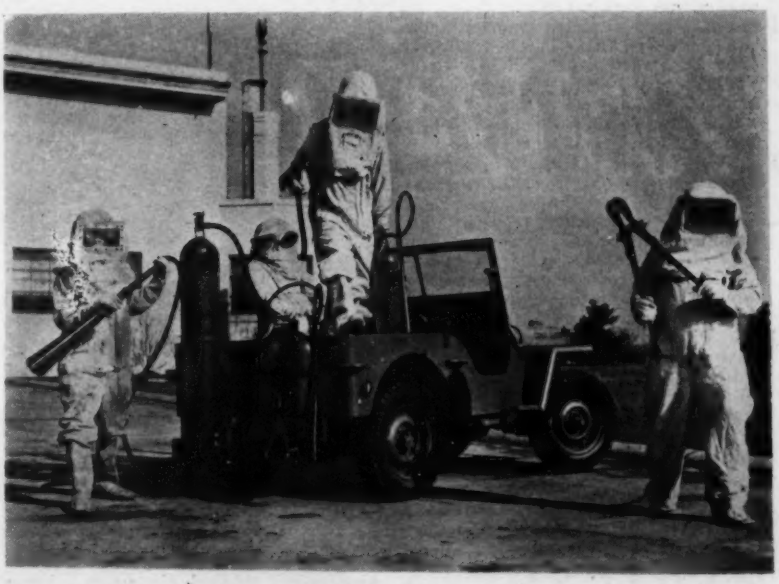
Bernard R. Scully, 49, of Katonah, N. Y., former assistant Chief of the Westport, Conn., Fire Department, died on June 9 at the State Police Barracks in Rhinebeck, N. Y.

Mr. Scully, who for ten years had been an arson investigator for the National Board of Fire Underwriters, was working on an arson case in the Rhinebeck area when taken ill and died in bed at the barracks.

The deceased was for several years identified with the Connecticut State Firemen's Association and was also former President of the Fairfield County Chiefs' Emergency Plan. At one time he was a state police sergeant assigned to the Westport, Conn., barracks.

He is survived by his wife, a son and daughter; his father, Bernard T. Scully of Bridgeport, and four sisters.

THOMAS F. MAGNER



**New Job for Jeep**

The versatile jeep, especially equipped with cylinders of compressed carbon dioxide gas, has found a new job—saving planes and rescuing crews from crash landing fires at military airfields. Manned by soldier or sailor fire fighters clad in asbestos suits, these miniature "crash trucks" can travel over marshy or rough ground where many crash landings occur. The jeep, fitted with gas fire fighting equipment, rushes to the scene of the fire and discharges carbon dioxide gas on the crashed plane, reducing the air's normal 21 per cent oxygen content to 14 or 15 per cent, at which point fire cannot exist.

For Practical Discussion of Current Fire Department and Fire Management Problems

# REPLACEMENT PROGRAM FOR PNEUMATIC TIRES ON FIRE APPARATUS

THE discussion in this round table is a continuation of that which appeared in the June issue of FIRE ENGINEERING on replacement programs for pneumatic tires on fire apparatus.

The generous response from our readers made it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject or on next month's subject, which appears in the box on the following page. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40 Street, New York 18, New York.

## Discussion of the Question

**Clarence W. Brown, Chief, Wichita, Kansas:** We determine when tires should be replaced by airing and examining them once a week.

No definite period of service is set up, but it runs from approximately two to five years. This plan has worked out satisfactorily.

**Dan A. O'Connor, Chief, Omaha, Neb.:** When rubber is dead and shows signs of cracks, we replace with new tires. We have good success and have had no blowouts on runs or flats.

The average period of service is about six years. This is satisfactory.

**Earl A. Traeger, Chief, Minneapolis, Minn.:** Our tires are replaced when so worn that further service may result in blowouts. When treads are so smooth that there is such a possibility, tires are discarded.

There is no replacement program in force in this department. We buy our tires as they are needed.

**J. K. Piercey, Chief, Salt Lake City, Utah:** Drivers of all apparatus are required to make a daily check of tires on their equipment at the beginning of each shift. Also after each run the tires on all engines and trucks are washed and inspected carefully for breaks, nails, glass or other injuries.

The Superintendent of Equipment inspects all tires every sixty days. Tires which have developed lateral checks, breaks or cuts that have penetrated into the fabric are replaced. If there is any evidence whatsoever of damage inside, the tire is taken off and replaced. Tires are replaced also before tread becomes smooth.

To preclude the possibility of blowouts because of general deterioration, all tires are replaced at the end of four years' service if they have not been replaced during that time. We do not use repaired or recapped tires, because high speeds necessary in answering alarms would make a tire having a suction precarious and might pull the recapped treads loose.

This system has proven very satisfactory here. Since its inception several years ago we have never suffered a blowout or other tire failure while responding to alarms of fire. Although the program is somewhat expensive, it has proven its worth, because injuries to firemen or civilians and damage to equipment from one accident would be far more costly than the expense of maintaining our tires in A-1 condition.

**Edward C. Palmer, Chief, Grand Rapids, Mich.:** We have just completed an inspection tour of the equipment and tires in service.

One of the local tire companies furnished a competent tire man, who, with the help of our maintenance men, checked and inspected all tires as to condition and with some regard to age. Several replacements were necessary.

**John C. King, Chief, Hartford, Conn.:** Tires are replaced when their condition so warrants it. They are replaced every four years under ordinary circumstances.

This plan has worked satisfactorily so far.

**A. C. DuRee, Chief, Long Beach, Cal.:** This department adopted a depreciation schedule which was intended to be used as a replacement guide on apparatus, tires, batteries, hose, salvage covers, etc.

Our depreciation scale calls for heavy truck tires to be replaced at five years and installed on non-emergency trucks for not to exceed two years. On light cars and trucks, tires are to be replaced at five years. Both depreciation scales call for compliance regardless of whether the tires appear to have more service.

We have been able to keep reasonably in line with this schedule even during this war emergency period. Since adopting this replacement plan, we have never had a tire blowout.

**Frank Egenriether, Chief, St. Louis, Mo.:** Tire replacement is determined by inspection. We have no program of tire replacement by age, but all tires found to be ten years of age are replaced as soon as possible.

**Harry H. Fulmer, Chief, Indianapolis, Ind.:** Heavy duty truck and bus type balloon tires are allowed to run until the tread stock becomes smooth, some of which will remain in service seven years depending on whether it is an inside or an outside company. Inside companies will wear the tread stock smooth in about two years. Track tires are less than three years old and if the carcass is found to be in good condition, are recapped. Truck tires that are past three years old regardless of the condition of the carcass are condemned and junked. No major vulcanizing is done.

Passenger car tires are allowed to run until the tread stock becomes smooth, none are recapped and no major vulcanizing is done.

No set program is in force requiring the replacement of tires. As long as the carcass is in good condition and the tread not worn smooth, the tire is allowed to remain in service.

We have followed this system for years and our plan has worked out very well.

**John A. McCracken, Chief, Gary, Ind.:** Prior to the war, we followed a five year replacement plan for tires and tubes for heavy apparatus, which I will say worked very satisfactorily, as these tires were removed from emergency equipment and placed in service on other slow moving vehicles, giving the department a great deal more safety and security.

On all light cars and light apparatus, we determine the replacement of tires on this equipment by regular inspections, and if found defective in any way, the tire is transferred from this equipment and replaced.

An additional safety practice we follow is to use Life Guard tubes, which protect equipment in the event of a tire failure while traveling at high speed.

Our replacement schedule has been changed considerably since tire rationing went into effect. We have been asked to cooperate on a seven year replacement plan, which up to this date is working satisfactorily. However, this plan has brought about more rigid inspections, with emphasis on proper inflation and front wheel alignment. It is my opinion, with these closer and more rigid inspections, that the seven year plan will not decrease the efficiency and safety of the apparatus and men.

**William P. Payne, Chief, Spokane, Wash.:** We have daily inspection of all tires the first thing in the morning.

## HERE IS THE PROBLEM

**With regard to replacement of pneumatic tires on (a) heavy apparatus; (b) light apparatus.**

**1. How do you determine when tires should be replaced?**

**2. If a replacement program is in force requiring replacement of tires after a definite period of service, what period (in years) have you established?**

**3. How has your plan worked out?**

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**HOMELITE CORPORATION**

PORT CHESTER, NEW YORK

Tires on each piece of apparatus are checked and also the amount of gas in the gas tank. If there is any defect in the tires, the report is made at once to the mechanical division and tires are removed and replaced by other tires.

A tire taken off is checked over completely and not put back on the apparatus until okeyed by the tire repair company, but if a tire doesn't give us any trouble throughout the time we use it, we remove it and sell it at the end of a four year period anyway. From our experience, four years is a safe period to keep a tire on a piece of fire apparatus. A tire should never, in my opinion, be kept over five years.

This plan has been in operation in this department since I took office twelve years ago. We find it satisfactory to such an extent that we have never had a puncture or blowout while responding to an alarm. Therefore, in my judgment, this plan must be working out very well.

**Herman E. Gutheim, Chief, Cambridge, Mass.:** We have no standard plan here with regard to tires. I personally think they should be changed every six years, but like other things, circumstances alter cases. Some makes of tires wear better than other makes. We have tires that are mor than eight years old and are still apparently all right. Some have been recut and are doing very well. Since the Office of Defense Transportation came into the picture, I think all plans that might have been made, have gone astray. We try to make tires go as long as possible.

We have been very fortunate in getting tires whenever we need them, but have very few on hand at the present.

When tires show signs of wear, we replace them.

**G. E. Hare, Chief, Jacksonville, Fla.:** Tires on heavy apparatus are changed when defect or wear begins to show.

We never use tires over eight years old on regular equipment, and not that long if they show wear or defects.

**C. C. Killian, Chief, Fort Worth, Tex.:** We determine the replacement of pneumatic tires on heavy apparatus by the general condition of the tire. In no event is a tire used that is older than five years.

Tires on light duty apparatus are not used when they are over seven years old.

As stated above, we determine the general condition of tires after a thorough inspection every month after five and seven years respectively. They are replaced even though tread and sidewall look good. I believe safety of equipment and personnel should be considered.

This plan has worked very well here. We have had blowouts in the last five years. These were caused by weak sidewalls injured shortly before the tire blew. Under all conditions of emergency, we feel safe in the dispatch of equipment if tires are kept in operation on this basis.

**E. N. Whitaker, Chief, Takoma, Wash.:** When tires on heavy duty apparatus become bald or after they have been in service for six years, they are replaced. This has proved satisfactory.

Tires on light duty apparatus are replaced after tread is worn down or after two years of service.

## HERE IS THE QUESTION FOR THE NEXT ISSUE

**Have you noticed an increase in fire-setting by juveniles incidental to the general growth of juvenile deliquency which has been taking place since this nation entered the war?**

**If so, what per cent increase (approximately) has been experienced over pre-war years?**

**If you have been confronted by the problem, what steps did you take to remedy it, and what were the results?**

**What method, or methods, would you recommend to others for controlling the problem.**

**W. G. Lutkey, Chief, Oakland, Cal.:** We change our tires when they are worn smooth. If they will stand a re-tread, they are re-treaded. If not, new ones are installed. We have never had any trouble.

**Carl J. Kiessling, Chief, Worcester, Mass.:** At the present time there is only one method and that is by inspection of an authorized station under the supervision of the Office of Defense Transportation. For our own purposes, we attempt to replace tires as soon as they show signs of severe wear, bruises, cuts and similar markings that would indicate that they might be a menace to the men or the general public while responding to fires.

**Thomas H. Cotter, Chief, Providence, R. I.:** The general condition of the tire determines when the tire should be replaced. We take into consideration the age, tread wear, cuts and bruises, or any other evidence of defects.

We use tires for a maximum of seven years. Due to war conditions we have tried recaps if the casing is in good condition. They have proved very satisfactory. We have had no experience with synthetics as yet in the larger sizes.

Our program is working out satisfactorily.

**C. W. Ogborn, Chief, Columbus, Ohio:** The tires on our apparatus are inspected at regular intervals.

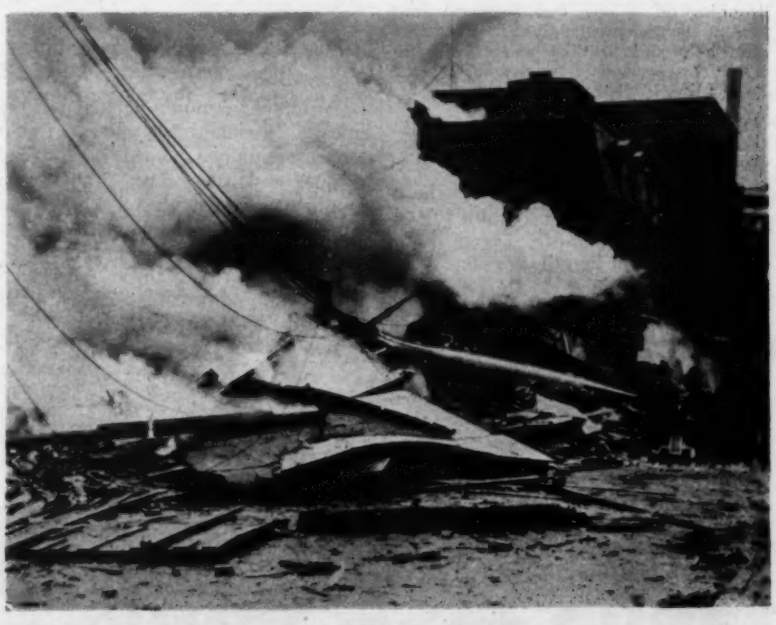
No tires are allowed to remain on apparatus when they become dangerously smooth, regardless of age. However, if tires do not wear smooth or show unusual signs of wear, we remove them after five years of service. No tires are allowed to remain in service after five years.

We have had no tire failures in following this plan.

**C. V. Thomas, Chief, Youngstown, Ohio:** We have no set replacement program. The changing of our tires is left entirely up to the fire department mechanics. They make the change when they feel it is necessary.

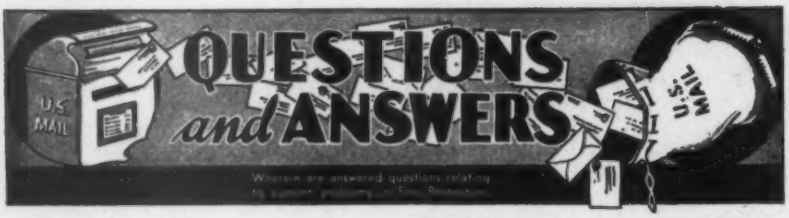
**H. R. Chase, Chief, Miami, Fla.:** In normal times, we replace tires as soon as they wear down to a point that

(*Continued on page* 463)



**Nineteen Die in Fire Caused by Plane Crash**

At least thirteen persons are dead and more than a score injured after an RAF B-24 Liberator crashed in flames into a street in the thickly crowded tenement district of Montreal, Que., flattening six buildings and heavily damaging eight others. The big ship, flown by one of the most famous aviators of the Polish Air Force, plowed through a block of homes and warehouses. The photograph shows firemen battling flames in the wreckage of plane and buildings. Note section of roof (foreground), which was thrown into the street by force of impact.




## Discovering Second Fire When Enroute to First

*To the Editor:*

If you were enroute to a warehouse fire and on the way passed an apartment house with smoke coming out around the eaves, what procedure would the officer in charge take? Would he stop at the apartment house fire or continue on to the warehouse fire?

M. F.

*Answer*: The only case where the commanding officer would be justified in keeping the entire company at the apartment house fire would be if life were in immediate danger. In such a case, the officer of the company would immediately contact fire headquarters and notify them of the action taken.

A company commander when going to a fire, is under orders to report to the fire from which the alarm has been transmitted. He is permitted to deviate from this order only where life is at stake, as above outlined.

As the statement in the question would indicate that it is not apparent that there is danger of loss of life at the apartment fire, the company must proceed to the fire to which it was originally directed, for there life might be in danger. The dropping off of one, two, or three firemen at the apartment house fire, to summon help and to take whatever steps might be necessary to ensure against loss of life, is all that can be done.

## Where Layout Is Impractical

*To the Editor:*

Five hundred feet of 2½-inch hose are stretched from the hydrant to the intake of the pump. Three lines, each 150 feet in length, are stretched, one line from one of the outlets on the pump, the other two from a wye connection attached to another outlet. All three of these lines are equipped with one-inch nozzles.

In this layout, can the pumper get enough water to supply the three outlets?

Can the pump furnish pressure enough to get 50 pounds nozzle pressure?

Will the hydrant supply enough water through the 2½-inch hose to get any sizable stream?

E. H. S.

*Answer:* The layout you give is impractical.

If the three 1-inch nozzles were operated at 50 pounds pressure, the discharge from each would be 209 gallons per minute.

The discharge from the three would be 627 gallons per minute.

The friction loss in 100 feet of hose carrying 627 gallons per minute would be 85 pounds, and the friction loss in 500 feet would be 425 pounds.

In other words, the stretch from the hydrant to the pumper, carrying 627 gallons per minute, would develop a friction loss of 425 pounds. Of course, the 96 pounds pressure would fall far short of overcoming this friction loss.

Even if the 1-inch nozzles were operated at a pressure of but 20 pounds each, the total flow from the three would be 396 gallons per minute, and the friction loss in the lead line from the hydrant to the engine would be approximately 180 pounds. Here again the 96 pounds hydrant pressure would fall far short of overcoming the friction loss from the hydrant to the engine.

It is evident that the pumper could not get enough water to supply the three lines even at pressures far below satisfactory pressures.

The hydrant would supply enough water for the three 1-inch nozzles at 50 pounds pressure, but the 500-foot line from the hydrant to the engine is the bottleneck.

Either the engine would have to be moved much nearer to the hydrant or else multiple lines would have to be stretched from the hydrant to the engine.

## Pumper Supplying Two Lines

*To the Editor:*

A pumper is pumping through two lines of 2½-inch hose, one 700 feet in length equipped with a 1¼-inch nozzle, and the other, 500 feet in length equipped with a 1⅛-inch nozzle. What pressure would be necessary at the pump to supply satisfactory streams? If three lines were used, what pump pressure would be necessary?

J. O.

*Answer*: If we were to run the pump at 200 pounds pressure, we would have a nozzle pressure of 45 pounds approximately at the 1¼-inch nozzle. This would represent a flow of 310 gallons per minute.

At the same engine pressure, the nozzle pressure on the 1⅛-inch nozzle would be 75 pounds, where the stretch was 500 feet of 2½-inch hose.

Seventy-five pounds on a 1⅛-inch nozzle gives 324 gallons per minute.

Thus the flow would be 310 + 324, or 634 gallons per minute at 200 pounds.

This would require a pumper of over 1200 gallons per minute capacity at 120 pounds.

Assume that instead of using 200 pounds at the pump, we operate it at "capacity" pressure, 120 pounds. Then the pressure on the 1¼-inch nozzle would be 25 pounds, and the flow, 23[illegible] gallons per minute.

The pressure at the 1⅛-inch nozzle would be 45 pounds, and the flow, 2[illegible] gallons per minute. The total flow would then be 251 + 230, or 481 gallons per minute.

A third line could be added in this latter case, employing a 1⅛-inch nozzle. If the line were also 500 feet in length the flow from this third nozzle would be 251 gallons per minute, and the flow from the three nozzles, 732 gallons per minute. A 750-gallon pumper could handle this supply very readily.

However, a pressure of 25 pounds at the 1¼-inch nozzle would not be satisfactory.

## Friction Loss in One-Inch Hose

*To the Editor:*

What is the friction loss in 200 feet of one-inch rubber booster line equipped with a 5/16-inch tip. Pump pressure is 100 pounds.

J. E. K.

*Answer*: The problem is to find the friction loss in 200 feet of 1-inch rubber booster hose, equipped with 5/16-inch tip, when the pressure at the pump is 100 pounds.

As no table values are available for the value of "K" for 5/16-inch tip on 1-inch hose, we shall make an approximation by assuming that the factor for 5/16-inch would be midway between that for ¼-inch and ⅜-inch. This gives a factor of "K" for 5/16-inch nozzle on 1-inch rubber lined hose of 0.158.

Nozzle pressure = engine pressure ÷ (1 + KL)

Engine pressure is 100 pounds.

K is, as given above, 0.158.

L, the number of 50-foot lengths of hose in the line is 200 ÷ 50, or 4.

Then N. P. = 100 ÷ (1 + .158 x 4)
= 100 ÷ 1.632
= 61 pounds

The friction loss is then engine pressure — nozzle pressure, or 100 — 61, or 39 pounds.

## Water Tower Layout

*To the Editor:*

A pumper, rated at 1,000 gallons at 120 pounds, is connected to a water tower with four lines of 2½-inch hose 600 feet long. The pumper is connected to a hydrant having 68 pounds pressure. Outlet of hydrant is 4 inches. The water tower is extended to a height of 55 feet and has a 2-inch tip.

Will you get an effective stream from this hookup?

*Answer*: In solving the problem you submit, we shall assume that hydrant will give sufficient flow and sufficient residual pressure to supply a pumper.

The back pressure in the water tower extended fifty-five feet, will be 55 x .434, or 24 pounds approximately.

The friction loss in the tower will be taken as 15 pounds.

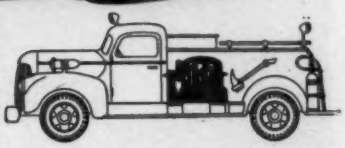
Thus the total loss due to friction and back pressure will be 24 + 15, or 39 pounds.

The available pressure for overcoming

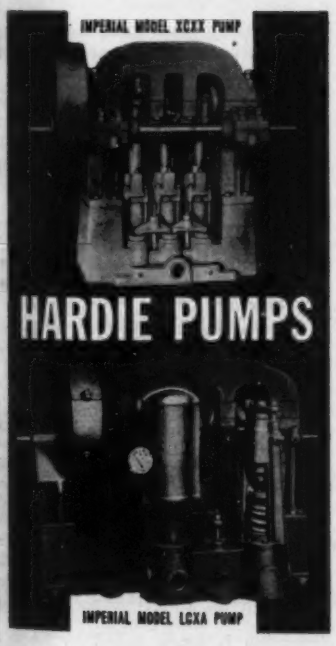
(*Continued on page 466*)

# *Specify a* HARDIE PUMP

## for Best Results from Fog Fire Fighter



*Above is shown Great Fog Fire Fighting truck built by General Fire Truck Corporation, Detroit, Mich., for U. S. Army Engineers. Equipped with a Hardie Imperial LCX pump delivering 60 gallons per minute at 800 P.S.I. at the slow speed of 130 RPM.*




● Constant, sustained high pressure to overcome all hose friction loss and deliver ample pressure at the nozzle to produce complete and perfect atomization of the water—that is the principle of Fog Fire Fighting which makes the pump such an important part of the Fog Fire Fighter.

For over 40 years Hardie has specialized in the manufacture of vertical crankshaft-driven pumps that have proven their quality in all the fields where such pumps are used. Hardie design and extra strong construction are supplemented by complete lubrication—every moving part, including plungers and plunger cups, runs in a bath of oil. These exclusive design and construction features make a Hardie pump the choice of outstanding builders of Fog Fire Fighters. Made only by The Hardie Mfg. Company, Hudson, Mich., Los Angeles, Calif., Portland, Ore.

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Single Trigger Control is a feature of the Hardie Fog Fire Gun. Pressure of the fingers on the easy-acting trigger opens the gun and selects the type of stream desired from wide close-up drenching fog spray to long distance stream. The gun closes instantly when pressure on the trigger is released. Strongly built to deliver nozzle pressure of 500 to 1000 P.S.I.

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Yours very truly,
Natrona Volunteer Hose Company

D. B. Smith & Co.
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Kindly send us 2 more INDIAN FIRE PUMPS. During the early spring the weather was very dry and our department became well acquainted with our present INDIAN FIRE PUMPS, as we had a great many prairie fires. Please hurry these 2 along.

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## The OCD Fire Protection Program

(*Continued from page* 424)

assurance was made by responsible local authorities that such equipment would be adequately mounted, manned, and maintained. If such equipment having been received is not by this time placed in service, this fact seems to indicate a lack of energy or interest on the part of the local authorities and, under present conditions, the retention of such equipment does not seem to be justified in the face of the demands which are being made upon the Director from other sources. It does not seem fair nor equitable to allow the retention of equipment vitally needed elsewhere against the possibility that it may be mounted at some undetermined future time.

6. **Is it true that the U. S. OCD is surveying and inspecting all equipment which it has allocated to political subdivisions throughout the country? What is the basis of this study?**

A program for surveying and inspecting all OCD equipment is under consideration for two reasons—first, to make sure that the Government property is being properly accounted for and maintained, and second, that it is actually needed and that it is in proper condition both by maintenance and supply of trained manpower to perform the duties for which it was loaned.

7. **Will replacement parts be available for OCD apparatus and equipment? If so, for how long?**

The original manufacturers of the major pumping units are prepared to supply spare parts upon application by the using communities and at their expense. Under present policy, no other replacements are available.

8. **In the event of accident or injury to OCD equipment, who is "liable"? And what action should be taken by the community which holds the equipment?**

If injury or loss occurs to COD equipment in use, and if such loss or injury is not caused by carelessness or negligence, any liability for such loss or damage may be removed from the Local Property Officer by the action of the National Office of Civilian Defense after certified statement of facts is received and approved. The actual relief is evidenced by the issue of an approved Form 518 by the National Office. In this case, the Local Property Office is liable up to the time the Form 518 is received, and when it is received it should be placed with his other property records as evidence of such relief.

Attention is again called to the fact that liability under the Property Officer's bond extends to and covers only the responsibility of the bonded officer to see that the equipment in question is properly cared for and maintained, and that if loss or damage occurs by the action of other persons to whom the equipment has been committed the recovery of any loss or damage for negligence in the first instance is a question between the Local Property Officer and the persons concerned and not at that time with the National Office of the OCD.

**9. Can a municipality to which OCD equipment has been allocated install and use this equipment in place of its regular fire department apparatus or equipment?**

No prohibition is categorically placed upon the use of OCD equipment for ordinary fires, but attention is called to the fact that this equipment is purely auxiliary in nature and that if regular equipment is available it should be used in preference to the OCD equipment because of its probable superior efficiency.

**10. Is it true that private plants, institutions, state or government installations and the like may secure and use OCD auxiliary fire fighting equipment?**

Under the legislation and regulations governing the distribution and purpose of OCD equipment, it will be noted that the equipment is loaned only for use by political subdivisions. It will also be noted that the distribution of such apparatus and equipment within the borrowing community is at the discretion and in accordance with the judgment of the Local Commander of such community, and if he desires that such apparatus should be located at a private plant, institution, or any other installation, the decision is his. By law no direct loan of this equipment will or can be made to individual installations as separate from the communities in which they are located.

**11. What will become of the OCD apparatus and equipment after the war?**

As to what will happen to OCD equipment after the war, it is not and cannot be a matter for OCD discussion at this time. The procurement and distribution has been in accordance with legislation which is still in force and which specifically provides for the procurement and distribution of this equipment for protection against "enemy bombing attacks, sabotage, and other war hazards." As long as such hazards exist and until the legislation is revoked or amended, no consideration can be given by this office to the distribution of the equipment now in existence unless there appears a very decided and established lack of need, in which case it would be declared surplus and disposed of in accordance with the provisions and under the direction of the Surplus War Products Administration.

## Leland Stowe to Broadcast for Fire Underwriters

Leland Stowe, noted foreign correspondent and news analyst, will broadcast a series of weekly news commentator programs, starting July 22, under the sponsorship of the National Board of Fire Underwriters, it was announced recently. The broadcast will be heard over a coast-to-coast hookup of the Blue Network from 7:15-7:30 P. M. EWT, Saturdays (6:15-6:30 P. M. CWT, and rebroadcast 9:30-9:45 P. M. MWT, 8:30-8:45 P. M. PWT).

Mr. Stowe is one of the most colorful figures in the newspaper profession as well as one of the most highly respected men in the business. A winner of the Pulitzer Prize, he scooped the world on the Nazi invasion of Norway. He has been a familiar sight in foreign offices and legations all over the world.


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A BEAUTY from the "Lone Star State"

Recent Model McAllister Fire Apparatus equipped with WATEROUS 500 G.P.M. Series Parallel Centrifugal Pump

McAllister Apparatus is quality built throughout for dependability and long life.

Selection of the pump for your next piece of fire apparatus is just as important as the selection of the entire apparatus. The outstanding record of WATEROUS Fire Pumps through 58 years of continuous manufacture will be back of your WATEROUS Pump.

Literature on Request

WATEROUS COMPANY · ST. PAUL, MINNESOTA

*Also Manufacturers of WATEROUS Fire Hydrants*

WATEROUS

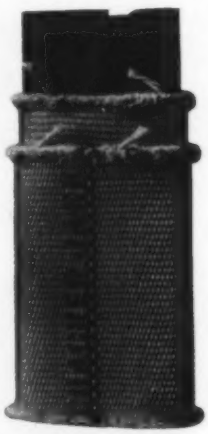
CENTRIFUGAL-ROTARY

FIRE PUMPS

# 36 Years Experience + Vision for Tomorrow

*Make "American Rubber" Products*

*Timed for Today's Needs*



It's this long experience . . . plus our practice of always looking ahead . . . that have enabled us to meet the emergencies brought about by this global war. Experience plus Vision have enabled us to develop Ar-Polene, the American synthetic, and to use it in such a manner that, in many cases, it is superior to natural rubber.

•

Now just as in normal times, you can depend upon "American Rubber" products for today's needs, and tomorrow's.

Since 1905 Crackerjack double jacket Fire Hose has been the standard on the Pacific Coast, and the favorite of firemen.

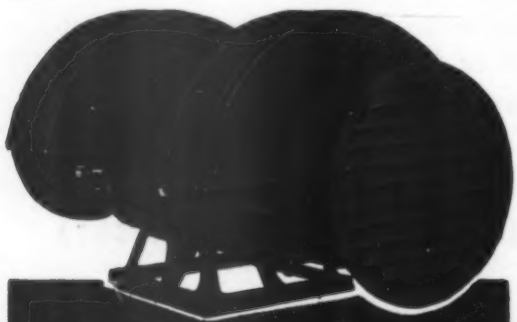
*The*

## AMERICAN RUBBER *Manufacturing Co.*

*Factory and General Offices*

Park Avenue and Watts Street — Oakland 8, California





STERLING MODEL "M"

## GENERAL ALARM SIREN

You Can Depend On It *ALWAYS*

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to instal and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M".

**ALSO**

**manufacturers of a complete line of apparatus sirens.**

**Write for literature.**

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street — Rochester, New York


## Tentative Program of I. A. F. C. Conference

**Registration open August 26 at 2 P.M.**

**MONDAY, AUGUST 28, 1944**

**Directors' Meeting—Breakfast—8 A.M.**
**Conference called to order at 10 A.M. in Pantlind Hotel, Grand Rapids, Mich., by the Executive Secretary, Jay W. Stevens**
Introduction of Host Fire Chief, Edward C. Palmer and President, International Association of Fire Chiefs, Chief Art J. Baker
Singing of the National Anthems
Invocation
Introduction of Association's Officers, Past Presidents, etc., by Secretary-Treasurer
Introduction of Local Officials by Host Chief
Address of Welcome
Response to Address of Welcome
Memorial Service
Recess—until 2:00 P.M.

**"No Host" Lunch and Get Acquainted Meeting**
**Afternoon (2:00 P.M.—Business Session)**
Call to Order
Roll Call of Officers and Directors by the Secretary
Reading of Communications
Appointment of Committees by the President
**Topic No. 1: "The Present Status of Fire Apparatus Priorities,"** by N. A. Odum, Fire Defense Section, Government Bureau, War Production Board, Washington, D. C.
**Topic No. 2: "Spray Nozzle Test"** by Calvin Lauber, National Board of Fire Underwriters, New York. Discussion by Chiefs James J. Higgins, Rudolph Swanson and John J. Tubridy. Motion Pictures.

**TUESDAY, AUGUST 29, 1944**

**Directors' Meeting—Breakfast—8:00 A.M.**
**Morning (10:00 A.M.)**
Reading of Communications
Report of Secretary-Treasurer
President's Address
Reports of Sectional Organizations by Secretaries or Directors

**Report of Standing Committees:**
a. President's Advisory Committee, F. B. Philbrick, President, The Gamewell Company, Chairman. A program for the development of the Association will be presented by this Committee.
b. Membership Drive Committee, Jay W. Stevens, Executive Secretary, International Association of Fire Chiefs, Chairman. Results of the recent membership drive, and plans for the future.
c. Post-War Planning Committee, Selden R. Allen, Chief of the Fire Department, Brookline, Mass., Chairman. A review of fire protection improvements from coast to coast planned for post-war inauguration; what the fire service may expect.
d. Priorities for Fire Apparatus and Equipment, John Alderson, Chief of the Fire Department, Los Angeles, Cal., Chairman. Present status of the problem of priorities as it relates to the Fire Service.
e. Radio Communications, Roi B. Woolley, FIRE ENGINEERING, Chairman. Present status, and future promise of two-way radio for the Fire Service.
f. Man Power, G. R. McAlpine, Chief of the Fire Department, Oklahoma City, Okla., Chairman. Effect of War on Personnel Strength of Fire Departments; a review of experiences of fire departments from coast to coast.
g. Constitution and By-Laws, Samuel J. Pope, Chief of the Fire Department, Boston, Mass., Chairman.
h. Public Relations, I. H. Case, Fire ENGINEERING, Chairman. A suggested program of activities designed to advance the standing of the Fire Service and the Association in the eyes of the public.
i. Co-ordinating Committee, Ray Tiller, Chief of the Fire Department, Waterloo, Ia., Chairman. Outline of methods considered essential in developing more effective coordination between the Districts and the International Association.
j. Consultation Committee, Presidents of Sectional Associations.

k. Exhibits, J. T. Keegan, Chief of Salvage Corps, Newark, N. J., Chairman.

**Afternoon (2:00 P.M.)**

Introduction of Exhibitors

**Panel Discussion: "Fire Loss Records—Should They Be Kept by Fire Departments and How Should the Loss Be Determined"**—Led by Chief John Alderson and assisted by Chief Albert Sullivan, Percy Bugbee and W. E. Mallalieu.

**Topic No. 3: "The Fire Hazards of Plastics, and the Extinguishment of Fires involving Them."**

**Symposium—Collaboration and Relationship which Should Exist between the Fire Chief and the Fire Marshal.**

**Topic No. 4: "Airmatic Squad Wagon" and Demonstration of Same** by Chief Barney Houston, Cincinnati, Ohio.

**Topic No. 5: "What about OCD Pumping Units after the War?"** by Chief Rol B. Woolley, Assistant Editor, FIRE ENGINEERING.

**WEDNESDAY, AUGUST 30, 1944**

**Morning (10:00 A.M.)**

**Topic 6: "Extinguishing Magnesium Fires, A Review of Tests with Automatic Sprinklers by the Automatic Sprinkler Company of America Plant at Youngstown, Ohio,"** by George W. Booth, Chief Engineer, National Board of Fire Underwriters; discussion by Chief Frank Vernotzy, Akron, Ohio, and Chief Charles A. Delaney, Lakewood, Ohio. Motion Pictures of the above Tests.

**Topic No. 7: "A Review of Tests Employing Fire Streams in Extinguishing Magnesium Fires at Plant of the Dow Chemical Company, Midland, Mich.,"** by A. C. Hutson, Assistant Chief Engineer, National Board of Fire Underwriters. Discussion by Chief John Tubridy, Buffalo, New York, and Chief Frank Vernotzy, Akron, Ohio.

**Afternoon (2:00 P.M.)**

**Demonstration on the Extinguishment of Magnesium Fires with Fire Streams**

**THURSDAY, AUGUST 31**

**Directors' Meeting—Breakfast—8 A.M.**

**Morning (10:00 A.M.)**

Reading of Communications
Report of Committees
Credentials
Resolutions
Courtesies
Unfinished Business
New Business
Selection of 1945 Conference City
Election and Installation of Officers
Final Adjournment

## Watertown Officers Promoted

Following recommendations by Chief Joseph T. Dibble, six promotions became effective in the Watertown, N. Y., fire department during month, according to announcement of City Manager Leland Wood.

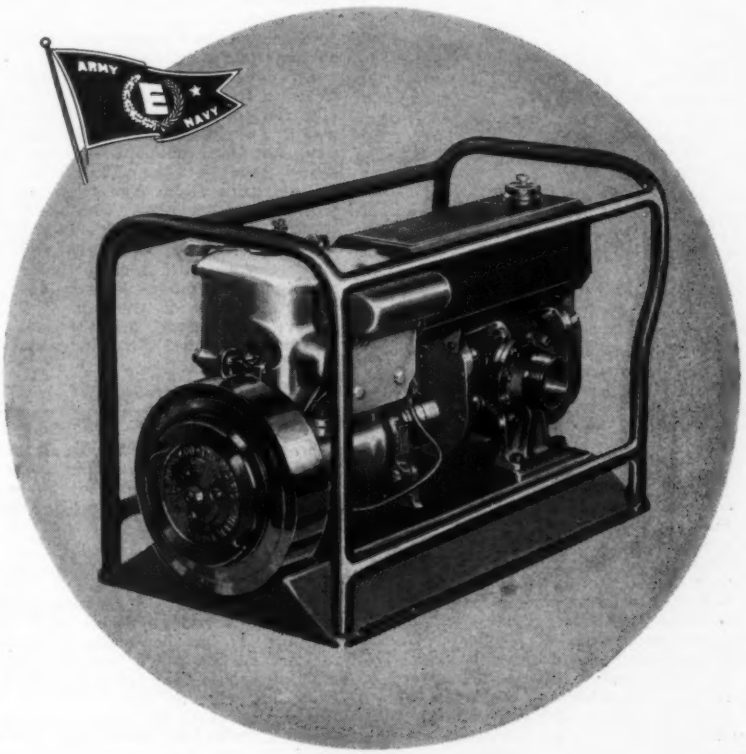
Advanced from the rank of lieutenant to captain were Lyle F. McCrea, George Bates, and Carl C. Schoeb. Both Captains McCrea and Bates entered the department on Jan. 1, 1926 while Captain Schoeb became a member June 4, 1928.

Firemen who were named lieutenants are: Clarence B. Gaffney, former football star at Clarkson college in Potsdam, N.Y.; Carl H. Lucas and Alfred E. Everett.

Other promotions are in the offing as Second Deputy Chief Walter N. Schell becomes eligible to take a non-competitive test for promotion to first deputy chief under civil service regulations. The captains will later take tests for Schell's post and lieutenants will be eligible for a captaincy.

SANFORD D. DEWEY


Pacific
HANDY BILLY
Portable Pumper




The principles of design and precision manufacture that have made the Pacific Handy Billy such an effective fire fighter for the Navy will, in due course, be available to protect forestry, industry and shipping against the ravages of fire.

**Fire Fighting Equipment Division**
**PACIFIC MARINE SUPPLY COMPANY**
**SEATTLE, WASHINGTON**

Our inquiring reporter overhauls the firemanic news of the day

**We return "in person." In resuming the Watch Desk, by name, the editor of this column wishes to thank all the Faithful who have so generously culled, clipped and contributed their findings to the Watch Desk during the past eighteen months while he was away. To those whose offerings have not been published—pardon—and have patience. They'll receive consideration. And to those with a nose for news, who want to 'oin the Watch Desk's merry little band of clipper-outers and cutter-uppers, just send in your findings. Remember, what is desired are tales of the odd, the bizarre, the unusual, and the outstanding in the Fire Service. Selah! R.B.W.**

### Pep Pill Proves Positively Deadly!

Maybe you've listened in on a New York radio broadcasting station and heard a pep pill named "Vitaplus" publicized as a tablet tonic that would decrease by 20 to 39 per cent the gasoline consumption of your automobile. If so, the following yarn will interest you.

The tablet is reported to be the product of Vitaplus, Inc., New York City, whose president and treasurer is Dr. Sylvan D. Broder of this city. Well, Dr. Broder, a chemist, was arrested in April, along with a Kalman Greenberg, lawyer, also of New York, and accused of having falsely advertised the qualities of the tablet on the radio and by other means.

What is more interesting to the fire service is the fact that a few minutes before their arrest they paid a fine of $500 for their corporation for having violated the Administrative Code by storing 525 pounds of picric acid, a dangerous explosive, in the converted six-story tenement which they occupied as a factory.

According to Inspector Louis Stern of the Bureau of Combustibles (N. Y. C.) he had found enough of the explosive in the building to blow up the block. On the top floor, he stated, was 125 gallons of acetone, a highly inflammable solvent.

Acting Lieutenant Charles Wilson of the N.Y.F.D. was making an inspection of the factory with Mr. Stern when the explosive was discovered. David P. McKean, Assistant Corporation Council (N. Y. C.) assigned to the fire department, told the magistrate—who accepted the $500 fine that a permit would not have been granted by the department for the storage of such a large amount of the acid.

The culprits were released on $2,500 bail.

This is indeed the age of chemistry!—and of charlatans and worse! Thank goodness for sharp eyes in the fire service! But one wonders if the punishment fits the crime?

* * *

### Every Group a Fire!

We'll bet the vamps of Victor (Ia.) are hot, and who could blame 'em, even if the folks in their community have set a new record for "unnecessary alarms."

That firemen are called for the slightest provocation—and sometimes without any rhyme or reason, is common knowledge, but it remained for the citizens of Victor, and its vamps, to add a new page to the records. The whole story is told in a news item sent us by an Iowa contrib', thus: **Members of the department answered a call to the Frank Smith home Monday morning. Someone noting that a group of people had assembled decided that the gathering must have been caused by a fire and turned in an alarm."** Will our poet laureate sweat out a ditty on "The Vamps of Victor" or "When You See a Group—It's a Fire!" or the like?

* * *

### Saves Money—Loses Life!

Of what availeth it if a man shall save his ducats and go to his death in the doing? It has happened so often in the fire service you'd think by this time people would have taken the lesson to heart, but evidently not.

Out in Denver (Colo.) Pete Martensen, aged 85, who had stored away some $2,720 in $20 bills in his shack died from burns received when he dashed frantically back into his flaming shack to find his treasure trove. He saved it—but it won't do him any good now.

* * *

### Joke's on the Brothers—Creek WAS on Fire!

Skeptical firemen who suspected they were being victimized by a practical joker when they were notified that Ox Creek was on fire discovered it was no joke. An oily scum was burning fiercely enough to damage a bridge and threaten a coal yard. The "firemen drowned the flames" says the wayward press—prob-ab'ly by pumping the Creek back onto 'em?

* * *

### You Don't Need to Believe This

This is a yarn about a Boston Brave—not the base-baller, but the Fireman—which strains the credulity. However, we print it, just as we received it from an unknown contrib' who clipped it out of "Parade."

*"Responding to a fire alarm in Boston a fireman fell off the hook and ladder whe the engine was a mile away from the fir The fireman picked himself up, ran throug a lot, up an alley and crossed the pedestri bridge. He arrived at the fire and put i out before the engines arrived. He mis riding back to the fire house when he fel off again. This time the engine stopped and picked him up."*

He might be fast on his feet, but thi should make him "fast to the truck" wit glue or something!

* * *

### Firehouse Makes Good (?) Blaze

At Allegan (Mich.) the state conservation department's fifteenth district central firehouse, located on the Kalamazoo River near Allegan (Mich.) went up in flame and smoke when the Allegan fire department's truck broke down at the scene. The building, constructed by fire fighters in their spare time only a year ago was totally destroyed.

* * *

### Careless Fingers

Firemen of the District of Columbia were summoned to release fingers of Julius Thomas, 31, Washington (D. C.) when they inadvertantly became held in a vice-like grip under the hood of his automobile. Seems that Julius entered his car and started the windshield wiper, but it wouldn't work. Raising the hood of the car to make adjustments, Mr. Thomas' fingers became inextricably entangled in gears of the starting motor. Passersby, heeding his wails for help did the usual thing—snapped a box call ing the firemen. Thomas went to Casualty hospital and we dunno what became of the windshield wiper, or the car.

* * *

### Fire Foils Boy's Suicide

Because a rubber hose attached to the exhaust of an automobile in a garage in Brooklyn, (N. Y.) caught fire Henry Choiecki, 19, was saved from suicide. Firemen, summoned to extinguish the smoky blaze, found Choiecki unconscious from carbon monoxide fumes in the front seat of the car, whereupon they promptly revived him, put out the fire and hustled him to hospital. The lad was despondent over failure to get a job. (Thanks J. M.)

* * *

### There' No Phuel Like an Old Phuel!

Out in Tillamook (Ore.) Mr. W. Bruce saw one of his children hewing on a copper object. He was horrified to find it was a dynamite cap. After taking it away from the child, and administering the filial scolding, Mr. Bruce decided to see what it contained. So he pried it with a toothpick.

The resulting explosion tore off two fingers of his right hand. According to Ma Bruce, she had started to throw the cap in the stove when the child asked for it.

* * *

### It Could Happen in Washington

A buff from the nation's capitol sends us the one about a uniformed guard at the Munitions building, that city who happened to look out of a window one April day, and sprinted for the nearest fire alarm box. Then, red faced, when the Brothers rolled up, he apologized for all the trouble he'd caused. He had mistaken the April fog for smoke.

# SQUEEZ-GRIP *has them covered!*

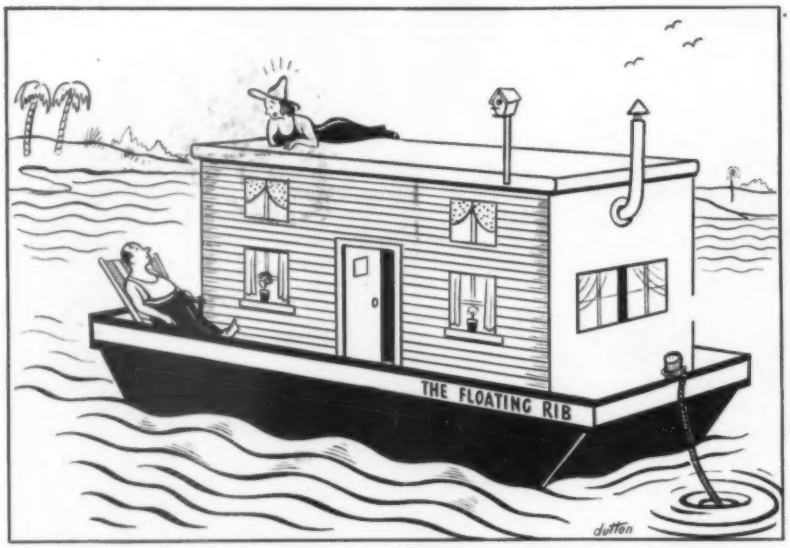
**The swift release of carbon dioxide against sudden fires is so simple with the sensationally new SQUEEZ-GRIP valve that women workers can operate it easily and effectively. With this modern C-O-TWO release valve anyone using it merely closes his hand to operate the release lever, just above the carrying handle, and carbon dioxide, the fastest non-damaging fire extinguishing agent, knocks out a fire in split seconds. Even while carrying a 15 pound extinguisher—no need to set the cylinder down to operate it—C-O-TWO gas can be discharged or stopped as quickly as you can close or open your hand. Time is saved . . . gas is saved . . . property is saved. SQUEEZ-GRIP is Safer—It's Faster.**

C-O-TWO

C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK, NEW JERSEY

# FALSE ALARMS




"Henry! Don't You Think We Should Have a Fire Escape?"

## Embarrassing

A wife in Westchester addressed her husband: "Put a twenty-dollar bill in my bag, please, while I powder my nose. I must run for the train."

On the train a pleasant lady shared the seat with her. During a temporary absence of the pleasant lady, the Westchester wife opened her bag to get at her lip-stick. The twenty-dollar bill was not there. Then she remembered that the pleasant lady had had a chance to loot. With complete cynicism she peeked in the pleasant lady's bag. Inside it was a twenty-dollar bill. "Huh," thought the wronged wife, "thought you were smart, huh?" So she slipped it out and presently the pleasant lady reappeared and they parted, neither knowing the other's name. And that night her husband slapped his pallid head.

"My golly," said he, "I just thought of something, my dear, I forgot to put any money in your bag this morning."

---

An executive, told to report to his draft board, returned to his desk the next day. When asked his status, he replied: "I'm classified in a special 5-B—baldness, bifocals, bay window, bow legs and bunions."

---

## A Hot Warning

It was the candidate's first great speech, and he wanted to make it tell, and wished to end with a warning. He could have couched his warning in the old proverb about locking the stable door after the horse was stolen, but that was too commonplace. He wanted something original.

He quickly thought of something better. Then he shouted:

"Don't, fellow countrymen and citizens, I beg you—don't wait till the house takes fire before you summon the firemen."

---

## Safety First

In a certain school in New York there was a teacher, an energetic advocate of "Safety First," who opened her class each morning by rising and asking: "Children, what would you do if fire were to break out in this building?" The children would reply in chorus: "We would rise in our places, step into the aisle, and march quietly out of the building."

One morning when the children arrived at school they found themselves honored by the presence of the well-known and beloved Dr. Henry van Dyke. The teacher stepped before the class and, instead of the usual fire drill question, said, "Children, what would you say if I were to tell you that Dr. van Dyke is to speak to you this morning?"

Instantly from the class came the reply sounding chorus: "We would rise in our places, step into the aisle, and march quietly out of the building."

---

## You Betcha!

A candidate for the police force was being verbally examined.

"If you were by yourself in a police car, and were being pursued by a desperate gang of criminals in another car doing forty miles an hour on a lonely road, what would you do?"

"Fifty," promptly replied the candidate. —*Point*

---

Three slightly deaf men were motoring from the north to London in an old noisy car, and hearing was difficult. As they were nearing the city, one asked:

"Is this Wembly?"

"No," replied the second, "this is Thursday."

"So am I," put in the third. "Let's stop and have one."

"Don't Argue, Young Man. I'm Not Leaving Until My Hair Is Dry!"

Cardox Fire Trucks are worthy running mates of the famous Cardox Airport Fire Truck. Self-contained . . . ready to roll at the first flash of fire . . . they go into action fast; knock out fires quickly with a tremendous mass discharge of cold, inert carbon dioxide *applied at the rate of hundreds of pounds per minute.*

Packing a wallop of 3 tons of liquid Cardox $CO_2$, Cardox Fire Trucks extinguish fires with a giant blanket of cold vapor and minus 110°F. $CO_2$ snow . . . *providing extinguishing coverage heretofore beyond the scope of mobile $CO_2$ equipment for industrial or municipal use.*

### Wide Coverage for Large and Small Hazards

Cardox Fire Trucks embody in mobile equipment basic Cardox advantages which are responsible for the outstanding record of Cardox Fire Extinguishing Systems. These advancements in engineered control and application of Cardox $CO_2$ gives non-damaging carbon dioxide enhanced fire extinguishing performance.

Even relatively large fires are within the scope of the Cardox Fire Truck. Equally important, numerous smaller hazards, requiring proportionately smaller extinguishing applications, can be given uninterrupted protection with a single filling of Cardox $CO_2$. No highly specialized personnel is required. Any group of plant personnel can quickly become a highly efficient Cardox Fire Squad.

Write on company letterhead for Bulletin 2364.

★ ★ ★

**CARDOX CORPORATION**
**BELL BUILDING • CHICAGO 1, ILLINOIS**

*District offices in*

New York • Boston • Washington
Detroit • Cleveland • Atlanta • Pittsburgh
San Francisco • Los Angeles • Seattle

**CARDOX**
$CO_2$ FIRE EXTINGUISHING SYSTEMS

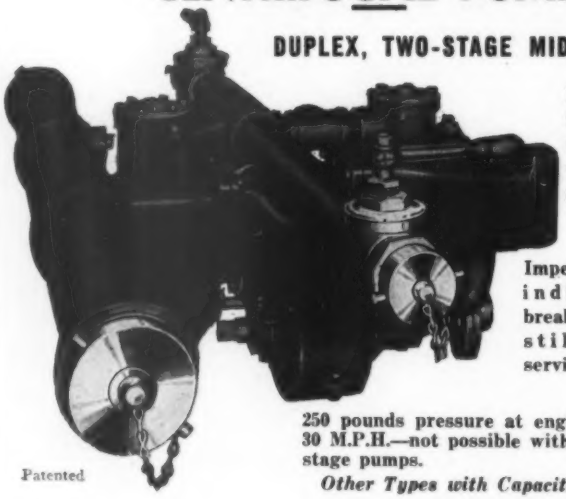
Barton Front Mounted

AMERICAN-MARSH PUMPS

Barton-American Midship

FIRE APPARATUS CENTRIFUGAL PUMPS

DUPLEX, TWO-STAGE MIDSHIP MOUNTED



Patented

High Pressure performance entirely unaffected when unit used to pump gritty water.

•

Impellers mounted on individual shafts—breakdown of one pump still leaves one for service.

•

250 pounds pressure at engine speed equal to 30 M.P.H.—not possible with conventional two-stage pumps.

*Other Types with Capacities to 750 G.P.M.*

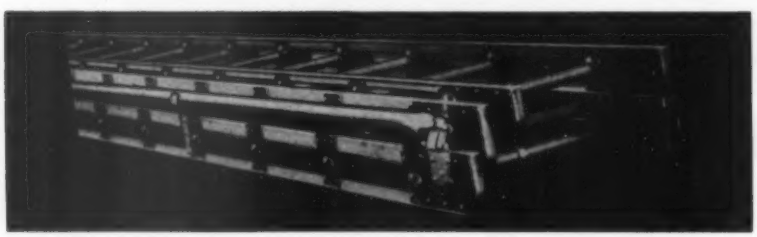
•

WRITE FOR BULLETIN 8731F

•

AMERICAN-MARSH PUMPS, INC., Battle Creek, Michigan

*Pumps — and pumps only — since 1873*



Again Available

STRONG-LIGHTWEIGHT Aluminum Ladders

★ Reallocation of aluminum by the government permits the manufacture of a limited number of fire department and industrial ladders. The three section, aluminum, heavy duty extension ladder illustrated is type 3 EL. Its unusual strength combined with remarkable light weight makes it one of the most popular fire ladders ever designed. Because of these characteristics . . .

. . . a 65 foot ladder of this type can easily be raised by four men and a supervisor — an impossible feat with ladders not made of aluminum.

FOR GREATER SAFETY AND EASE OF HANDLING

The locks operate automatically at any desired point during ladder extension. The rope and flexible cable are arranged for simultaneous automatic extension of both flies.

★ ★ ★

Write for information on standard sizes and aluminum ladders built to specifications.

Aluminum Ladder Company

200 Carbis Street
Worthington, Pennsylvania

## What's Burning

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of June, 1944. These figures compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

| Month Ending June 30 | Losses in Thousands of Dollars |
|---|---|
| **Ville St. Laurent, Que.**—Plants of Industrial Glass Works and British Rubber Co. damaged | 800 |
| **Lyons, Ore.**—Mount Jefferson Lumber Co. destroyed | 125 |
| **Pittsburgh, Pa.**—Barn on Charter Oak farm destroyed | 50 |
| **Los Angeles, Cal.**—American Heating Co.'s warehouse destroyed | 55 |
| **Statesville, N. C.**—Bunch Furniture Co.'s store destroyed | 125 |
| **Portland, Me.**—A. R. Wright Co., Winslow & Co., Inc., damaged | 60 |
| **Pittsburg, Cal.** — Redwood Manufacturing Co. plant destroyed | 2250 |
| **Salem, Mass.**—Boston & Maine Railroad freight shed, three freight cars damaged | 80 |
| **Hanover, Ont.**—Bldgs. of William Knechtel Milling Co. damaged | 50 |
| **Los Angeles, Cal.**—Coast Van Lines warehouse destroyed | 125 |
| **Los Angeles, Cal.**—Pacific Mutual Life Ins. Co. cafeteria lunchroom and assembly room damaged | 50 |
| **Whittier, Cal.**—Barr Lumber Co. yard destroyed. Workshop and Manual Arts Bldg., Whittier High School adj. damaged | 80 |
| **Redmond, Ore.**—Dant & Russel Planing Mill damaged | 70 |
| **Portland, Ore.** — Jefferson Lumber Co.'s plant destroyed | 60 |
| **Cranbrook, Alta.** — Dairy barn owned by Consolidated Mining & Smelting Co. dairy at Marysville damaged | 50 |
| **Rouyn, Que.**—Yard of Abitibi Lumber Co. and warehouse of St. Onge, Inc., damaged | 200 |
| **Kerman, Cal.**—Morello Winery, near San Joaquin River, damaged | 125 |
| **Snow Hill, Md.** — Snow Hill Hatcheries damaged | 250 |
| **Montreal, Que.** — Eastern Public Cattle Market, Bodonoff Stock Exchange damaged | 80 |
| **New Orleans, La.**—Madison Lumber Co. damaged | 70 |
| **Gardiner, Ore.**—Gardiner Hotel destroyed | 50 |
| **Cleveland, Ohio**—Upper floor of Dunham Elementary school damaged | 50 |
| **Philadelphia, Pa.**—Kahn & Rosenau Co. warehouse damaged | 80 |
| **Waskom, Tex.** — Arkansas Fuel Oil Co. gasoline refinery damaged | 50 |
| **Menasha, Wis.**—John Strange Paper Co. destroyed | 125 |
| **Anchorage, Alaska**—Alaskan fishing village, Hoonah destroyed | 90 |
| **South Brookfield, Nova Scotia**—Stock of Nova Scotia Woodenwares, Ltd., damaged | 80 |
| **Cincinnati, Ohio** — Frank Messer & Sons, Inc., damaged | 50 |
| **Hillsborough, Cal.**—Residence of Dana Fuller damaged | 50 |
| **Adrian, Mich.**—Garage of Consumer Power Co., containing 24 trucks, one small fire truck destroyed | 60 |
| **Detroit, Mich.** — Thirty-two houses, two barns at Detroit Racetrack damaged | 200 |
| **Toledo, Ohio** — Plant of Ohio Insulation Division of Mitchell & Smith, Inc., damaged | 80 |
| Norwalk, Ohio—Fireland oil station, storehouse of Maple City Ice Co. destroyed | 50 |
| **Springfield, Ore.** — Fuel bin at Mountain States Power Co. Plant damaged | 50 |
| **Oshkosh, Wis.** — Winnebago County Old People's Home north of here destroyed | 125 |
| **Owensound, Ont.**—Plant of Henkel Flour Mills at Ingles Falls destroyed | 60 |
| **Visalia, Cal.**—Plant of Visalia Planing Mill damaged | 50 |
| **Shelbyville, Ind.** — Vandergrift-Soller Co. automotive accessory concern destroyed | 170 |
| **Jackson, Mich.** — Jackson Metal Products plant damaged | 60 |
| **Corvallis, Ore.**—Medo-Land Creamery Co. destroyed | 50 |
| **Rutland, Vt.**—Plant of Rutland Grocery Co., Inc., damaged | 50 |

## Classified Advertisements

*Bids Wanted, For Sale and Help Wanted, $5 per inch. Position Wanted, $2.50 per inch*

### WANTED

Fire Equipment Supply Companies, to sell Morning Pride Protected Rubber Firecoats, with Wing Sleeves, Chest Protector, Face Protecting Collar, Wool Wristlets, Double Shoulders, No Dirt Pockets. Also Firepants and Mitts. Write Morning Pride Mfg. Co., 1986 Home Ave., Dayton 7, Ohio.

### CHIMNEY POWDER

No need to send men on the roof for chimney fires. Has-Mor Soot Destroyer not only puts the fire out, it continues to work until it cleans the chimney, making it unnecessary to go back to another chimney fire. Put up in handy packages. Agents wanted. Harry S. Morgan, 52 Broad St., Johnson City, N. Y.

### WANTED: SALES REPRESENTATIVE

EXCLUSIVE: In protected territory — Eastern Pennsylvania for FIRE HOSE and other fire department equipment. This offer rarely made to sell an old established line of quality fire hose. All communications treated confidential. Box No. 55, FIRE ENGINEERING, 24 West 40th St., N. Y. C.

### POSITION WANTED

Fire Prevention Officer now with Government will be at liberty on short notice to accept position as city manager or Fire Prevention Officer for city. Eighteen years of experience. Address: Box 50, c/o FIRE ENGINEERING, 24 W. 40th St., N. Y. C.

### WANTED

Sales representatives are desired by a nationally known fire apparatus manufacturer. Several important territories open. Write fully, stating experience. Box 60, c/o FIRE ENGINEERING, 24 West 40th St., N. Y. C.

**Statesville, N. C.**—The Bunch Furniture Co. store destroyed ..... 125

**Cleveland, Ohio**—Two one-story warehouses of Murphy-Phoenix Oil Co. destroyed... 50

**Miami, Fla.** — Warehouse of Manhattan Distributors, Inc., damaged ..... 80

**Nashville, N. C.**—Evans Brothers Lumber Co. plant damaged ..... 50

**Rockwood, Tenn.** — Offices and several bldgs. of Molyneaux Lumber Co. destroyed ..... 50

**Walla Walla, Wash.** — Morrison Grain Warehouse destroyed ..... 50

**Birmingham, Ala.**—Birmingham City Hall damaged ..... 80

**Caldwell, Ida.**—Simplot Dehydrating Plant destroyed ..... 50

**Dover, Ohio**—Truck hdqts. of Dover Mines, Inc., Fred Weber Planing Mill and lumber storage shed, dwelling of Pat Thompson at Strasburg near here and several nearby homes and business places damaged ..... 80

**Philadelphia**—Kanter's Magic Shop damaged ..... 50

**Reading, Pa.**—Packing dept. bldg. of Price Battery Corp. in Hamburg damaged..... 80

**Union S. C.**—Bldgs. occupied by Charles Tire & Battery Service, Smith's Garage & Paint Shop, R. J. Fowler's Liquor Store and Sanitary Lunch destroyed..... 80

**Butler, Pa.**—Insecticide house of Central Chemical Co. destroyed..... 50

**Parkersburg, W. Va.** — Seven-block-long plant of Knickerbocker Stamping Co. damaged ..... 60

**Jackson, Miss.**—Plant of Standard Millwork & Supply Co. destroyed..... 225

**Waverly, N. Y.**—Main plant of Kasco Mills, Inc., damaged, and five Erie Railroad freight cars destroyed..... 425

**Bayonne, N. J.**—Four 100-foot repair barges of yard of McAllister Lighterage Line destroyed ..... 125

**Oakdale, W. Va.**—Alpine Theatre, dwelling and general merchandise store of A. Joseph; dwelling and grocery store of Sly-


# *Firemen Like This Coat For Many Reasons*

**Special combination suit with Bunker Pants is Midwestern's Outfit No. 101. Detachable wool linings. Flexible elastic inner sleeve for wrist. Keeps out water, cold and sparks. Equipped with Midwestern Safety Snap, a new exclusive feature. Can be easily and quickly fastened or unfastened—nothing can catch on it. Will not freeze or jam as easily as old type snap. Midwestern garments are favored by the larger municipal departments throughout the country. Write for literature and prices.**

- Adjustable collar strap
- Reinforced collar band for lining
- Lining attached with quick snap buttons
- Corduroy lined collar
- Reinforced, double stitched seams
- Vertical seams in sleeve shoulders
- Inside of fabric, heavily napped cloth
- Two outside pockets
- Wool detachable lining
- 6-inch storm flap

## BUNKER PANTS

- Lining held by snap buttons
- Eight suspender buttons
- Safety snap on belt
- 2 side and 1 hip pocket
- Wool detachable lining
- Reinforced adjustable belt
- Wide protecting flap
- Special Vanitex fabric
- Cloth crotch pads for pole sliding

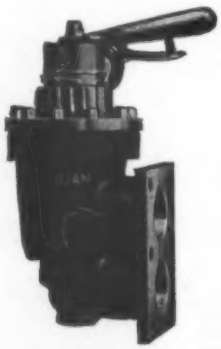
**MIDWESTERN MFG. CO.**
**MACKINAW, ILLINOIS**

# ROSS
## RELIEF VALVES

1" to 2½" female threads

**MODERN PUMPERS**

demand these rugged, modern relief valves. Their simplicity and responsive dependability make them a must. Made in sizes from 1 inch to 2½ inches with capacities up to 1600 g.p.m. and pressures up to 750 lbs. Write for descriptive literature describing the complete line of



**TRAILER PUMPERS**

Trailer pumpers require valves made especially for this type of work, such a valve is the ROSS Trailer Pump Relief Valve. Made in sizes from 1 inch to 2½ inches with pressure adjustments from 10 lbs. to 750 lbs. and capacities from 0 to 500 g.p.m. at 120 lbs. pressure.

ROSS VALVE MFG. CO
INCORPORATED
P.O. BOX 595, TROY, N.Y.


man Joseph; McPherson drug store destroyed ..... 80

**Denver, Colo.**—Goldberg Brothers Wholesale Hardware Bldg. damaged ..... 170

**Jeffersonville, Ind.**—George Pfau Sons Oil Co. plant destroyed ..... 170

**Nevada, Mo.**—Three story bldg. in business district occupied by Chamber of Commerce, Western Union, rationing board, book store, Missouri Pacific offices and Elks Club damaged ..... 50

**Des Moines, Ia.**—Four-story brick bldg. of H. B. Leiserowitz & Co. damaged..... 100

**McAlester, Okla.**—Stone and concrete bldg. of State Penitentiary damaged ..... 50

**Saginaw, Mich.**—Wood Specialty Co. warehouse and retail store bldg. destroyed; including A. P. super-market, Lee & Cady Co., Cal-Wood quarters, Strobel Bros. store ..... 150

## Northwest Fire School Held

The Northwest Fire School was held in St. Paul, Minn., on May 15 through 17, at the Public Safety Building. The school, which is now being conducted under the sponsorship of the State Fire Marshal, had a registration of over 500, representing about 125 Minnesota towns and including many from neighboring states.

One of the most interesting features was the fire department evolution drill contest. This involved eight teams comprised of volunteer fire departments only. These teams were the winners of the competitive evolutions conducted last summer at the Regional Schools. Last year a set of evolution drills in connection with firemen's training were drawn up and a copy sent to every fire department in the state. Teams were then organized and the fire departments in each regional association held a contest at their regional school, and the winning team was then slated to compete in the finals at this year's fire school. This program has proved so effective and has created so much interest among the volunteers that new evolutions, more advanced than those in 1944, have been drawn up and the fire departments have already begun to drill for this summer's contests. Finals will again be held at the 1945 Northwest Fire School.

The school was held under the leadership of Newell R. Johnson, Commissioner of Insurance and State Fire Marshal, and Leonard C. Lund, Deputy Commissioner, Fire Marshal Division. Chief William J. Sudeith of the St. Paul, Minn., Fire Department acted as Chairman.

## Captain Kuch Retires

Captain Herman F. Kuch, commanding the Division of Apparatus of the New York Fire Department with the title of Acting Chief of Battalion, and a veteran of forty-six years service, retired on June 16th. Captain Kuch was injured last fall in an accident to his official car and had been on sick leave for several months.

Because of his long detail to the Division of Apparatus, his lectures at the Fire College, and his official attendance at practically all major multiple-alarm fires for many years, Captain Kuch has been personally known to thousands of firemen. His duties have brought him into close association with all of the commissioners and commanding officers of the Department since the days of Chief Croker.

Appointed to the Department on Jan-


# *Our* SENSIBLE LUG COUPLING

Here is a coupling which, for practical use and hose protecting qualities, is without equal. Its sturdy construction — expert designing and careful workmanship makes it "the finest money can buy." They are available now on proper priority rating.

It is backed by over 50 years of experience in the manufacture of Fire Department Brass Goods. Prepare now to replace all your old and worn couplings with these new, modern and safe Sensible Lug Couplings. Their rounded, reinforced spanner lugs cannot rip the hose as it comes out of the chute when laying hose, cannot catch in cracks or in obstructions to cause delay of action or cause strain in the hose. Makes for ease in handling, speed in replacing burst lines or lengthening lines. Replace all your old couplings with Sensible Lug Couplings and specify them on all new hose.

# POWHATAN
## BRASS & IRON WORKS
RANSON ★ WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia

*Established* 1892

ary 18, 1898 Captain Kuch was one of the first group of firemen appointed after the creation of the Greater City. Hugh Bonner was then Chief of Department. At a fire in East 44th Street on March 24, 1900 Fireman Kuch, then assigned to Engine 21, was seriously injured when carried down with other members of his company in the collapse of the building. Captain John J. Grady, who was acting as Chief of Battalion, and Firemen Peter F. Bowen and Willian J. Smith were killed, and Fireman Kuch's escape was miraculous. His helmet and boots were dug out of the ruins three months later.

After serving as Acting Engineer for three years Fireman Kuch was promoted to Engineer of Steamer in November 1906, being assigned as Supervising Engineer shortly thereafter. While acting in this capacity his work came to the attention of Commissioner Waldo and resulted in his detail by Chief Croker to the Division of Apparatus. This was in 1910, and since that time he has been continuously at the Shops. Promotion to Lieutenant came in 1911, and to Captain in 1918.

On the retirement of Deputy Chief Marshall in 1934 Captain Kuch was given command of the Division of Apparatus by Chief John J. McElligott, with the designation of Acting Chief of Battalion.

CLARENCE E. MEEK

## Correspondence

### Federal Fire Fighters Association of California

*To the Editor:*

The Federal Fire Fighters Association, Inc., of California is a non-profit corporation made up of fire fighters working under Federal Civil Service.

Our one aim is to improve working conditions of all federal fire fighters and the fire service generally of all Army, Navy and Marine Corps establishments.

We feel that Federal Civil Service fire fighters need an organization of this kind, and will be more than glad to furnish additional information to any fire department under Federal Civil Service.

Cordially yours,
A. C. WRIGHT, Secretary-Treasurer
149 East 74th Street
Los Angeles 3, Cal.

### Two Volunteers Now German Prisoners

*To the Editor:*

The Davis, Cal., Volunteer Fire Department has an unusual record to report. Our membership consists of twenty regular members and ten junior members. Since 1941 our honor roll has grown from two to twenty-six, a number of the juniors having enlisted in the Navy on their seventeenth birthday.

We started our junior department years ago when we took in a young fellow as an honorary member.

Two of our fire-eaters are now prisoners of war in Germany. Oddly enough both of these men were bombardiers and their planes were shot down over Germany during 1943. We feel this is very unusual for such a small volunteer department.

(Continued on page 467)


# FIRE TRUCKS GET THERE

*with* THORNTON *Automatic-Locking* DIFFERENTIALS

# Wheels PULL . . . Don't Spin

*with*
THORNTON
*Automatic-Locking*
DIFFERENTIALS

If your fire apparatus must travel off of paved roads, up hills, through snow, deep sand, mud, gravel or over ice, then look into this THORNTON *Automatic-Locking* DIFFERENTIAL.

Spinning of one wheel which normally stalls a vehicle in conditions mentioned above, seldom occurs when this *Automatic* DIFFERENTIAL is installed . . . because both wheels must rotate when power is applied.

If you want traction and action investigate our features and advantages today. Write . . . wire . . . or telephone. Available under limitation order certificate L-158.

**THORNTON TANDEM COMPANY**

8753-C GRINNELL AVENUE • Plaza 9700 • DETROIT 13, MICHIGAN

Make Big Trucks Out of Little Ones with the THORNTON *Four-Rear-Wheel* DRIVE

In U. S.: Sold by TRUCKSTELL DISTRIBUTORS In Canada: H. V. WELLES, LTD., Windsor, Ont.

# A BADGE *to be proud of* NOW *more than ever* BEFORE

Now—because of the Government's prohibition of the use of nickel, brass, copper, nickel plating, and chromium—we are making these badges and insignia in sterling silver, sterling silver gold plated, rolled gold on sterling silver and 14 karat gold.

Today—for just a little more, you get a sterling silver Braxmar Badge—without doubt the best badge you can buy anywhere.

*The blue covered catalog is the latest published but write for our new price list, effective July 29, 1943. Only prices in the catalog on 14 karat gold items are still in effect. A special Fire Dept. circular is now in preparation. Watch for your copy.*

C. G. Braxmar Co., 242 W. 55th St., N. Y.
JOHN O. VEIT, Pres.

**BRAXMAR BADGES**

Standard for over 60 years

"HAHN" FIRE APPARATUS

SINCE 1907

FINEST IN THE WORLD * STREAMLINED * BALANCED CHASSIS * AMPLY POWERED * VERY EFFICIENT PUMPS WITH PLENTY IN RESERVE

HAHN MOTORS, Inc.

HAMBURG, PA.

EXAGGERATION . . .

From the time Hale Fire Pump Company put out its first circular nearly 30 years ago, it has consistently avoided exaggeration. First, because we believe it is sound policy to be certain that performance is better than claimed. Second, because improvements through research frequently make the superlative of today seem obsolete tomorrow.

Both old customers and new, find that Hale promises on the "advertising front" are consistently carried out on the "fire-fighting front" of PERFORMANCE.

*Write today for up-to-date information on Hale Fire Pumps . . . built in all Standard Sizes.*

HALE FIRE PUMP COMPANY

Conshohocken, Pa.

## War Fare

By Roi B. Woolley

### Not All Was Loss

We learn that valuable information for the treatment of gas casualities has been gained by the Army Medical Department as a result of the recent accident in Brooklyn in which several hundred persons were made ill by chlorine gas (see Jerry Daly's excellent story in this issue).

Although civilian physicians retained responsibility for treatment of gas casualties, over 70 of whom remained for some time in hospitals, Army doctors, it is disclosed, participated in the care of patients. Their findings as a result of this treatment of gas casualties on a fairly large scale for the first time since World War One will be of value in the handling of any future cases involving lung-irritant cases. The major conclusion drawn by medical officers, it is said, is that the best treatment is administration of oxygen under pressure, instead of "bleeding" the gas as was done in the first World War. They found that a patient can, and will tolerate pressure oxygen in a mask.

Hospitalization of victims permitted study of the usefulness of pencillin and sulfadiazine in preventing infections such as pneumonia, which always menace a gas patient. The officers are reported to have also studied various types of apparatus for administering oxygen to gas casualties. The general public never knew it, but medical officers and civilian consultants were in Brooklyn immediately after the accident helping treat the more serious cases. A team of medical officers from Edgewood arsenal, Maryland were on duty several days in one Brooklyn hospital.

* * *

### The Truth Comes Out

To the men of the Seattle Fire Department under Chief Fitzgerald goes perhaps the honor of having first "encountered" what is now the famous "B29" Bomber which as everyone knows dealt such a devastating blow at the Yawata steel mills of Japan in June.

No, it wasn't anything to brag about—and many of the Seattle firemen never really knew that when they fought the blaze in the Frye Meat Packing plant in Seattle the plane which caused the fire, with the tragic death of 21 persons, one a Seattle fireman, was the first of the B29's. But it was—and it was on that first test flight that the crash came.

Only after the Japanese bombings were the facts released that when the experimental plane crashed on February 18, 1943 killing all the Boeing company flight-testing personnel, the B-29 program almost crushed with it. Loss of the trained personnel was a shock and broke the continuity of thought and effort devoted to the program up to that time. Further, only a small group of Army personnel had intimate knowledge of the airplane and its equipment. There was pessimism about going ahead—but the Army Air Force, under General Arnold did. We got the plane—other heroes tested 'em—and we know what happened when the sky

other Air Force heroes took them to Japan.

* * *

**Comfort to "Hitlerhito"**

VALLEJO, Calif.: Two men were killed and 38 injured in explosion which ripped up concrete floor of Mare Island Navy Yard Machine shop. Resulting fire was extinguished by the Naval Yard's fire department.

PHILADELPHIA, Pa.: Six explosions in warehouse of a commercial alcohol plant shook the Delaware waterfront, throwing 12 firemen to the ground as they attempted to enter the building.

PEARL HARBOR: The Navy announced 30 men were killed, 100 were missing and 380 were wounded in an explosion that destroyed several small landing craft in Pearl Harbor.

In another explosion at the ammunition depot at Oahu Island, at about the same time, three others were killed; seven are missing and an undetermined number injured.

LOUISVILLE, Ky.: When fire destroyed a large frame warehouse here, at the Army's medical depot, 60,000 mattresses "and other materials" went up in smoke. Cause "not determined." Several of our faithful clippers sent this 'un in—some with caustic comments about what they termed lack of cooperation between Federal and municipal fire forces.

BOSTON, Mass.: A new depot building was destroyed and adjoining maintenance structure badly damaged at Portsmouth (N. H.) Navy Yard.

NORFOLK, Va.: Five persons, including two women marines, died and three others were seriously injured in a fire which gutted a training building at the Cherry Point (N. C.) Marine Corps air station.

BUTLER, Pa.: Twenty-five hundred barrels of fuel oil were destroyed in a fire at the Valvoline Oil Co's plant in East Butler. Lightning!

WARWICK, N. Y.: Fire fighters from six communities waged three-and-a-half hour battle to extinguish flames in huge fuel oil storage tank, ignited by lightning. Nearby lumber yard saved.

HAMBURG, Pa.: Fire swept the Price Battery Corp. destroying large quantities of batteries awaiting shipment to battle areas. Loss $100,000 plus.

CARNEYS POINT, N. J.; A smokeless powder drying house of E. I. du Pont de Nemours Company Inc. containing nearly 4000 pounds of powder was destroyed by fire. No casualties.

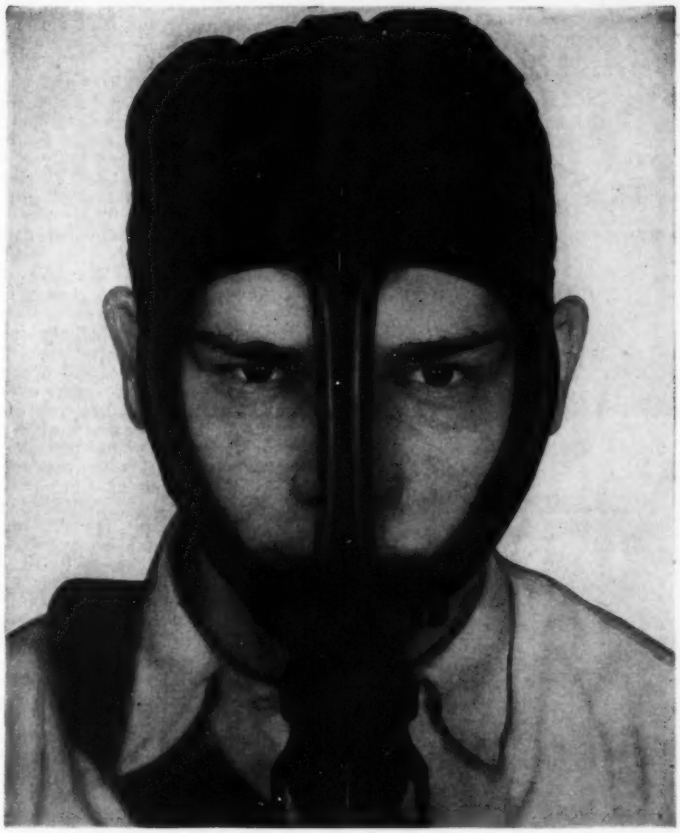
BOMBAY, India: A fire which broke out in Bombay docks with attendant explosions on April 14 is disclosed to have caused damage that may amount $12,000,000.00. The fire raged out of control for three days and nights, and for five days a cordon of military was thrown around the area. Thousands of sappers and others assisted the fire fighters, many of whom were killed, along with some 300 others. Thousands were injured. A Station Officer, and the head of the Bombay Salvage Patrol were among the dead.

* * *

**Hot Off the War News Tape**

Fireboats, most of them British, took part in the invasion. They were manned by specially trained crews from all parts of England all members of the National Fire Service. . . . Fumes from chemicals stored on a ship in Brooklyn, following a fire, began giving off a


NOTE The FULL VISION
IN THIS ACME GAS MASK



This Acme FULL VISION All-Purpose Type FD Gas Mask is approved by the U. S. Bureau of Mines. Protects against Carbon Monoxide, Acid Gases, Organic Vapors, Toxic Smokes, Fumes, and Smoke Suffocation. Write for literature and prices.

ACME PROTECTION EQUIPMENT COMPANY, INC.
Manufacturers
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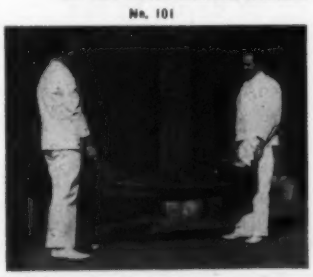
Reeves
Reg. U. S. Pat. Office
FLEXIBLE STRETCHERS
No. 101



Every casualty, no matter how slight or how serious, can be made worse by rough, improper handling. Reeves Stretchers can be used in the most inaccessible places.

If your dealer cannot supply you write to:

A. SMITH & SON, Inc.
1237-39 RIDGE AVE.
$14.50 PHILADELPHIA, PA.

*The Sign of Quality!*

**HYDRANTS VALVES and Pipe Line Accessories**

**A. W. W. A. HYDRANTS** *Underwriters Approved*

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

SPECIAL TRAFFIC MODEL (shown at right) is designed to yield at ground line under impact, repair being simply renewal of breakable bolts and breakable coupling on stem. Dry top, revolving head, easy to lubricate. High efficiency because barrel diameter not reduced and there are no working parts or obstructions in waterway.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or with sliding stem and lever. Also furnished hydraulically operated. Square Bottom type operates in any position. All are rugged and dependable, made of best material with highest quality workmanship.

**M&H VALVE AND FITTINGS COMPANY**

ANNISTON, ALABAMA


chlorine type of gas as a result of being heated. The gas drifted inland, penetrating some buildings in the vicinity of the docks, necessitating the removal of people in that immediate vicinity. Two civilian firemen were injured in the fire, which was controlled after thirty minutes. . . . A U.S. blimp crashed in Canada while on reconnaissance over the wreckage of a RCAF training plane. Luckily, no casualties. . . . Charlestown (W. Va.) is proud possessor of a new Coast Guard fireboat. . . . Well, the 9 Regional Offices of the Office of Civilian Defence closed in June, a number of smaller "field offices" taking their place. . . . Speaking of OCD, the Boston City Council has asked Mayor Tobin to abolish the city's OCD **"because it performed no useful function"** in a Sunday air raid test. . . . There has been a considerable revision (downward) in the civilian protection setups in a number of cities, including the Nation's capitol. . . . At least one robot bomb is said to have "backfired" on the Germans. A RAF pilot reported that his guns caused a robot to swing at right angles to its previous course and when last seen it was heading back over the Channel toward the Calais coast whence it came. . . . **A woman worker is far safer in a powder plant than she is in her own home!** Statistics prove it, sez Col. T. C. Gerber of Chicago Army ordnance director of safety before meeting of the Central Safety Congress. Oh well, we'll take his word for it, but 'us gals still prefer the garment ind'stry'. . . . Rescued from blazing London building in one of its big fires, a black retriever is now the mascot of the Wood Green AFS. Trapped on the sixth floor, the dog was saved by firemen and since then he has refused to leave his rescuers. . . . Americans in London marvel at the great number of life-preservers seen on all sides. They are fastened to many bombed-out dwellings and if you peer through the gates, you'll see why they're there—they mark hundreds of specially constructed open reservoirs built to provide auxiliary water for the fire fighters. . . . The U. S. has an incendiary bomb which scatters sticky gobs of burning gasoline jelly on enemy targets. . . . Two little girls hunting for scrap in Long Island (N. Y.) received serious burns when they examined a tin can which they found in an abandoned barn (using a lighted match, of course) and which blew up in their faces, spraying them with flame; . . . In order to show how good he was, a RCAF civilian fireman set fire to a hangar somewhere in Canada and put it out himself. We dunno the punishment. Much publicity is being given the front mount pump on Army jeeps, but thus far no flood of requests has been received by the manufacturer.

## A Revisit by Fire

Wrecked in an explosion which took nine lives in January 1943, the Walter Hutchins stores near Massena, N. Y., burned to the ground for a second time on May 9, 1944. The structure, located at Hutchins Bay, was destroyed in 1943 when a pail of gasoline was ignited.

Origin of the last fire was undetermined. Massena volunteer firemen responded to an alarm but found the building beyond saving upon their arrival.

SANFORD D. DEWEY


**BOYER**

**Headquarters for *"DEPENDABLE"* FIRE APPARATUS and FIRE DEPARTMENT SUPPLIES**

★

FORTIFY FOR FIRE FIGHTING

★

**BOYER FIRE APPARATUS CO.**

LOGANSPORT INDIANA

**WENTWORTH FIREMAN'S UNIFORM CAPS**

UNION MADE PROMPT DELIVERY

No. 342

Wentworth Fireman Caps are made of the Highest Quality Standard Materials available and by the Most Skilled Union Craftsmen in all the New and Standard styles. Our 47 years of experience and skilled workmen guarantee you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.

No. 441

Write direct for latest circular and prices or see your local dealer.

**WENTWORTH-FORMAN CO., INC.**
**578b Washington St., Boston, Mass.**

*Manufacturers*

Fireman Cap Specialists for Over 47 Years

## The Round Table

(*Continued from page* 445)

makes the non-skid feature of the tire useless. Now, however, due to war conditions, we recut the grooves and use our tires as long as we feel they are reasonably safe. We have also cut our speed to thirty-five miles per hour.

We have never worked out any replacement plan for we have found that due to the normally fast driving and excessive use of brakes necessary in responding to fire, that the treads wear much more rapidly than with the use of the same tires on commercial trucks. It is not the miles traveled that wears out our tires. Discarded tires are turned over to the sanitary department.

**John J. Tubridy, Commissioner of Fire, Buffalo, N. Y.:** Our pre-war tire replacement program for heavy apparatus provided for a complete change of tires on apparatus every four years and before tires became five years old.

This plan has been suspended since July 1, 1943 for the duration and tires are now purchased as needed. Tire inspections are a regular monthly assignment.

For some eighteen years this program was carried on and we never had a tire failure on heavy equipment due to poor rubber in that time.

Light apparatus and passenger car tires are changed as needed when determined by inspection. They have always been handled that way.

**A. M. Furlong, Master Mechanic, Syracuse, N. Y.:** On all pumping engines and ladder trucks the tires are all replaced every five years and the tubes, which are of the puncture proof type, every six years. On cars and light trucks they are changed when necessary.

We have an agreement with the Public Works Department to sell them all tires which we replace to be used on the heavy trucks in their department. By selling these tires to this department you can readily understand that both departments gain by such an agreement as there are a good many serviceable miles left in the tires for such work as is done by their trucks. Also we are not gambling on the lives and safety of our men and apparatus.

**Terence Mulligan, Chief, Sacramento, Cal.:** Our engineers inspect the tires daily on the change of shift; our maintenance engineer inspects them once a week.

We have a policy of replacement of tires on a ten-year basis. This period can be shortened, if necessary, of course.

We have found this plan to be satisfactory.

**Barney J. Houston, Chief, Cincinnati, Ohio:** Any tire of any size is replaced at the first sign of any defect. Tires on light apparatus and passenger cars are replaced when about two-thirds of the non-skid is worn off. These tires are then used on slower moving equipment in other departments.

On heavy apparatus tires are replaced after about five years of service regardless of condition. These tires are then used on slower moving equipment in other departments.

By this plan we are able to keep


# *Hose-Drying is Easy with*

CIRCUL-AIR

THE AIR CONDITIONING

**FIRE HOSE DRYER**

Electrically-operated, the CIRCUL-AIR dries hose in a very few hours —25 to 50 times faster than a tower or a rack. Makes wartime fire hose last longer. By prolonging the life of hose now in service and, by quick drying, lessening the need for large hose reserve for "reloads" while wet hose is drying, CIRCUL-AIR helps to build up the Nation's rubber stock pile.

*Preferred by Fire Chiefs in municipal, industrial and government service because it:*

- Saves hose
- Saves drying time
- Eliminates towers
- Is easier to use
- Prevents mildew and rot
- Improves building design
- Reduces hose stretch
- Air-conditions as it dries
- Saves space, work, time and critical materials

IMMEDIATE DELIVERY FROM STOCK!

*For further information write today to*

THE CIRCUL-AIR CORPORATION

6339 East Palmer ··· Detroit 11 Mich.

# *Superior Workmanship in Every Fitting*

EASTMAN is proud of its attention to detail in the manufacture of every item of fire-fighting equipment for men in the field. We know that you rely on us for dependable, sturdy fittings that will stand up under long and hard usage.

EASTMAN has given you this dependability through 120 years of service to the fire-fighting field.

For information concerning our complete line of products, please write.

SAMUEL EASTMAN COMPANY, Inc.

CONCORD, N. H.

"The Superior"
A MODERN and PROVEN
LIFE NET

The SUPERIOR LIFE SAVING NET is stronger than any other, because of the tested breaking strength of 1,800 lbs. of each individual rope.

The direct pull shock absorber system eliminates all friction and its greater resiliency provides for a safer, easier landing.

Made of Chrome Molybdenum steel, the frame may easily be folded for storage within a few seconds.

For the utmost in LIFE SAVING VALUE . . . "SPECIFY SUPERIOR".

For ECONOMY, have your old net converted into a "SUPERIOR".

William Moeller
*Designer Consultant*

Other SUPERIOR Products:
Training Nets and Structures
Ladder Belts
Life Size Training Dummies

SUPERIOR FIRE EQUIPMENT CORP.
235 E. 42nd St. New York, N. Y.

JANESVILLE QUALITY TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and
THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

NOW AVAILABLE!
We can now supply old type ¾ Felt-lined Firemen's Boots.

JANESVILLE APPAREL CO.
JANESVILLE, WIS.

good tires on emergency equipment and yet get the service out of the tires on slower moving vehicles where a tire failure will not cause an accident or failure to arrive at the scene of an emergency in the least possible time.

**C. C. Styron, Chief, Atlanta, Ga.:** We use only 14-ply tires on the apparatus in the department and have no set replacement program.

All tires are given periodic inspections and are replaced after six years of service, regardless of mileage. This has proven to be satisfactory and keeps all tires in good condition.

**J. E. Parrish, Chief, San Diego, Cal.:** The San Diego Fire Department's pneumatic tire replacement program for heavy apparatus provides standardized tire sizes in specifications for all new apparatus, not more than two tire sizes being used. All tires are best grade and interchangeable on all wheels of apparatus.

Tires when worn smooth are replaced with new tires. Old tires are turned over to city Operating Department to be recapped and used on slow moving utility trucks. If heavy apparatus tires are not worn smooth in five years, they are replaced with new tires. Old tires are worn out by Operating Department trucks. During the war we have had to use some recapped tires on heavy apparatus. They are matched with uncapped tires under three years old on dual rear wheels.

Chiefs' cars and light cars which respond to fire alarms have worn tires replaced with new tires. Recaps are used on cars which do not respond to fires. During the war we have had to use some recapped tires on chiefs' cars. They have proved fairly satisfactory. So far our program has worked out satisfactorily.

**A. L. Headlough, Chief, Fire Protection, Plum Brook Ordnance Works, Sandusky, Ohio:** We determine when to replace tires by the condition of the tire, checking wear on tread rather than the mileage. We use all dual tires on rear weels, sizes 750-20 and 700-20 heavy duty truck tires.

We never bleed out tires as this increases flexing and builds up pressure due to heat operation. This means faster wear and increases the danger of blowouts.

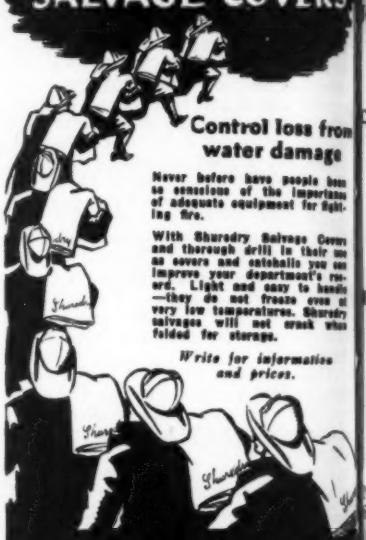
We check all tires every day and inflate weekly to proper pressure.

We mate dual tires, using worn tire on inside of wheel and new tire on outside. This relieves the inside tire overload. We use the new tire on wheel position for several hundred miles where they are subject to the least overload. New tires installed in the fall or winter will have a thinner tread by summer, and will therefore dissipate heat faster.

When we find stones or gravel fastened into the tread, they are removed at once. All tires are examined after every run, regardless if only one city block. Over inflation to carry the load causes less tread contact with the road and increases the wear or distorts the tread.

We drive on all kinds of roads, many of which are rough, and often off the roads. We do not use chains at any time. Our roads are narrow and we find that chains do not prevent slipping sideways. We don't have

USE Shuredry SALVAGE COVERS



Control loss from water damage

Never before have people been so conscious of the importance of adequate equipment for fighting fire.

With Shuredry Salvage Covers and thorough drill in their use covers and catchalls you can improve your department's record. Light and easy to handle—they do not freeze even at very low temperatures. Shuredry salvages will not crack when folded for storage.

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Fulton Bag & Cotton Mills
Manufacturers since 1870
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New York New Orleans Kansas City, Kan.

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

*Write for the Facts*

EDDY VALVE CO.
Waterford, N. Y.

many traffic conditions or street intersections. We are using the same tires for the fourth year and never have had a blowout. With proper care good tires on fire apparatus should last eight to ten years. Our care and inspection have been very satisfactory. We follow the instructions of the manufacturer very closely.

**John A. Keefe, Chief, Detroit, Mich.:** Tires on our apparatus are changed when they show the effect of wear or any defect. We do not have a tire replacement program.

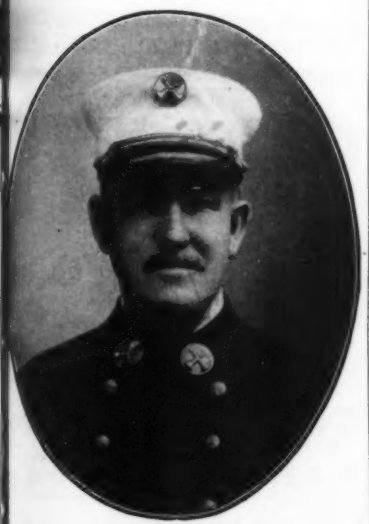
**Connie O'Sullivan, Chief, Memphis, Tenn.:** We determine when tires should be replaced by rigid inspection for any unsual wear or damage. This is done daily and after every run.

Our program in the past has been to replace tires after five years of service, if any unusual wear or damage is noted.

**Frank Vernotzy, Chief, Akron, Ohio:** Tires are replaced when they are worn or over age. We replace tires after ten years service. This plan has worked out very well.

## Chief John J. Gilday Retires

Chief John J. Gilday of the Hoboken, N. J., Fire Department has retired after fifty-seven years of continuous service.



Chief John J. Gilday
(From an early photo)

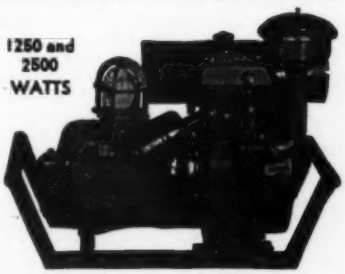
Chief Gilday joined the paid department on November 1, 1891, after serving four years in the volunteer organization which preceded it. He was made a captain in 1901, a battalion chief in 1917 and chief in 1918 following the death of Chief Michael Dunn.

He has the distinction of being the first fireman of the Hoboken Department to take an examination for an engineership and the first to take a physical examination for appointment to the force. All those who preceded him in appointment were named from the old volunteer ranks. He too was a volunteer but preferred to remain with his outside work of that time until an engineer's post was open in the department.

This emblem, which identifies one of the Nation's most complete lines of department supplies, is known and respected wherever fire fighting equipment is used. It is the mark of thoroughly sound design and extremely high quality.

**ELKHART BRASS MANUFACTURING CO. Inc.**
**Elkhart, Indiana**

**"U.S." PORTABLE LIGHT PLANTS**




**This 1250 watt, portable unit has been designed expressly for fire department use. It is small, light, compact and equipped with carriers for easy portability out on the job. Air-cooled 4-cycle engine 2⅝" bore x 2⅝" stroke. 2.4 H.P. 2 gallon fuel tank. Quick starting. Also 2500 watt size.**

**LARGER SIZES AVAILABLE**

*Write for Catalog.*

**UNITED STATES MOTORS CORP.**
**430 Nebraska Street, Oshkosh, Wis.**

**Do as thousands of fire-fighters — Wear H. S. COVER'S famous Nod & Shake**

**FOG-PROOF GOGGLES**

Not just ordinary gas-tight, smoke-proof goggles! Water placed inside lense keeps fog off indefinitely!

**SAMPLE $1.65**

**H.S. COVER, 68 Chippewa St., South Bend, Ind.**

THE New WHEAT
Rechargeable Spotlight
MODEL 158
2500 FOOT BEAM
25000 CANDLE POWER
1000 HOURS OPERATION
Critical Materials Reduced to a Minimum to insure Availability
FEATURES
★ Positive "non-spill" Construction
★ Less expensive Operation than dry cells
★ Free use of Hands. Light carries conveniently on Shoulder Strap
★ Weighs only 92 ozs. complete
★ Simple to Charge and Water No need to take Lamp apart
★ Light can be Focused and Directed as Desired
WRITE FOR COMPLETE DETAILS
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"ALL AMERICAN CHOICE"
INVINCIBLE NOZZLES
PREPARE — PROTECT
Portable equipment is the watchword of today.
Buy—
INVINCIBLE NOZZLES
and enjoy the benefits derived by experience of the pioneers in the nozzle field.
Fig. 403
F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
BOSTON, MASS.
1837 -- 1941

## Questions and Answers

(*Continued from page* 446)

friction loss in the hose and giving nozzle pressure will then be 120 — 39, or 81 pounds.

Four parallel lines of 2½-inch hose are equivalent to a single line of 2½-inch 600 ÷ 12.4, or 48.4 feet in length.

N. P. = E. P. ÷ (1.1 + KL)
= 81 ÷ (1.1 + 1.550 x .97)
= 81 ÷ 2.6
= 31 pounds

This pressure is too low to give a satisfactory stream.

If fifty pounds of the sixty-eight pounds at the hydrant could be utilized for boosting the pressure of the centrifugal pump located at the hydrant, then the engine pressure available for overcoming friction loss in the hose and giving nozzle pressure would be 81 + 50, or 131 pounds.

Nozzle pressure would then be 131 ÷ 2.6, or 50 pounds.

The discharge from a 2-inch nozzle at 50 pounds pressure would be 841 gallons per minute.

Neither the 31 pounds or the 50 pounds pressure at a 2-inch water tower tip is considered effective. Therefore the layout is not a satisfactory one.

## Assistant Chief Spaine Honored

Francis O. Spaine, first assistant fire chief of the New Haven, Conn., Fire Department prior to his retirement in May after serving thirty-eight years, was honored at a testimonial given by the New Haven Lodge of Elks and the State Fire Chiefs' Association.

Over 300, including fire officials from Connecticut, New York and Massachusetts, retired and active members of the New Haven Department and civic officials turned out to honor the veteran fire fighter.

## Chief Ross B. Davis Resigns

Ross B. Davis, formerly Chief of the Philadelphia, Pa., Fire Department and for the past several years Fire Marshal of the Navy Department in Washington, D. C., has resigned from his duties with the Navy because of ill health. He is now residing at the Wynnewood Apartments in Wynnewood, Pa.

## May Fire Losses

Estimated fire losses in the United States in May were $32,815,000, an increase of $3,518,000 or twelve per cent over losses in May, 1943, it was announced by W. E. Mallalieu, General Manager of the National Board of Fire Underwriters. The total was higher than for any similar month since May, 1932, when losses totaled $39,270,000. The Board's estimates are based on incurred losses reported by member companies, plus an allowance for uninsured and unreported losses.

May losses represented a decrease of $1,931,000 or five per cent of losses of $34,746,000 reported in April. Losses in the twelve months ended with May 31 are estimated at $400,072,000 as compared with $330,427,000 for the year ended with May, 1943.

Spray MINOR BURNS WITHIN 15 MINUTES
with Gebauer's TANNIC SPRAY
The element of time is of first importance in the successful treatment of burns. If a burn is treated within 15 minutes after it occurs, the probability of blister formation is reduced to a minimum. But if time is wasted before proper treatment is started, serious complications and infection may follow.
When using Gebauer's TANNIC SPRAY in the treatment of burns, the factors involving time-loss are eliminated. This preparation is a stable solution of tannic acid ready for immediate use. Packaged in a sturdy amber bottle having an automatic dispensing cap, which permits the projection of the solution in the form of a fine jet stream. Upon application the solvent evaporates rapidly, covering the burn with an evenly applied, dry and flexible film of tannic acid.
Gebauer's TANNIC SPRAY is a practical *first* first-aid treatment for first, second, and small area third degree burns. Write for literature.
THE GEBAUER CHEMICAL CO.
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QUAKER
FIRE HOSE
Chemical Hose
Forestry Hose
Suction Hose
QUAKER QUALITY
REG. U.S. PAT. OFF.
QUAKER RUBBER CORPORATION
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"Half-Mile-Ray"

PORTABLE EMERGENCY LIGHTS

STORAGE Battery and Dry Cell Outfits for all types of service. Also Spotlights for cab mounting on vehicles.

*Send for Catalog "F"*

THE PORTABLE LIGHT CO., INC.
216 William St., New York 7, N. Y.

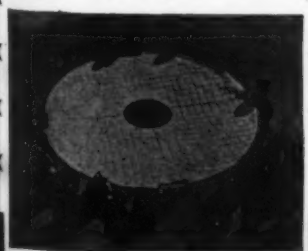
ATLAS

LIFE NETS

"the finest," have been instrumental in saving many hundreds of lives, without injury to the person rescued or to the men holding the net.

The many exclusive features of the Atlas net have been proven through performance. ATLAS NETS are still available and are the only modern, up-to-date nets, with dual action impact absorbers.

Specify ATLAS when you want dependable life nets.



ATLAS SAFETY EQUIPMENT CO., INC.
26 Warren St. New York 7, N.Y.

## Correspondence

(*Continued from page* 459)

Davis is well supplied with fire protection as there are three departments here, each having its own chief. They are the Davis Fire Department, the California Aggie Department at the college and the Army fire department, now also at the college, as the Army has taken it over. We are very proud of the fact that we work as one unit in case of emergency, and have always done so.

The City of Davis works with us, keeping all vacant lots plowed. We have had no large fires here in years. The last fire we had a few weeks ago was a "believe it or not." It involved an engine belonging to the Southern Pacific. The engine was left idle with a flow of oil in her fire box. When the crew attempted to fire her, she took off. You can guess the results. The volunteers worked well, and soon had everything under control.

Sincerely,
H. P. McWHERTER, *Chief*
Davis, Cal.

## Annual Reports Received

**Fitchburg, Mass.**—Annual Report of the Fire Department for the year 1943. 8 pages.

**Illinois Fire College**—Report of the Twentieth Fire College of the Illinois Firemen's Association. 10 pages.

**Waterloo, Ia.**—Fortieth Annual Report of the Fire Department for the year ending March 31. 26 pages.

**Fort Collins, Colo.**—Annual Report of the Fire Department for the year 1943. 22 pages.

**Minneapolis, Minn.**—Annual Report of the Fire Department for the year 1943. 42 pages.

## Convention Dates

Aug. 7-12—PENNSYLVANIA FIREMEN'S TRAINING CONFERENCE. Annual meeting, Lewistown, Pa. Secretary, Chief Charles E. Clark, Box 271, Wayne, Pa.

Aug. 15-17—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. Annual meeting. Secretary, Chief Jay W. Stevens, Merchants Exchange Building, San Francisco, Cal.

Aug. 28-31—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Grand Rapids, Mich. Secretary, Chief Daniel B. Tierney, 8 Robbins Road, Arlington, Mass.

Sept. 8-9—CONNECTICUT STATE FIREMEN'S ASSOCIATION. Annual meeting, Eastern Point, New London, Conn. Secretary, John Moehring, 56 Toms Road, Stamford, Conn.

Sept. 16—NEW JERSEY STATE FIREMEN'S ASSOCIATION. Annual meeting, War Memorial Bldg., Trenton, N. J. Secretary, Fred A. Trowbridge, 602 Chamber of Commerce Bldg., Newark 2, N. J.

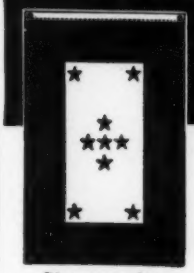
Sept. 16-17—OHIO STATE VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Lancaster, Ohio. Secretary, Merle W. Gifford, 5105 Market Street, Youngstown 5, Ohio.

Sept. 27—FAIRFIELD COUNTY FIRE CHIEFS' PLAN. Monthly meeting, Fairfield. Secretary, John Moehring, 56 Toms Road, Stamford, Conn.

Oct. 2-4—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Boston, Mass. Secretary, Irvin Shulsinger, 8 East 41 Street, New York, N. Y.

Oct. 25—FAIRFIELD COUNTY FIRE CHIEFS' PLAN. Monthly meeting, Old Greenwich. Secretary, John Moehring, 56 Toms Road, Stamford, Conn.

HONOR YOUR SERVICE MEN



*Blue stars, white panel, field of red. Send for catalogue.*

Honor your fellow-firemen now serving with the armed forces, by displaying this official

SERVICE FLAG

One star for each one in service. Available in any size or material desired. Send for Free illustrated catalogue and price list today.

Permanent ROLL OF HONOR

A permanent plaque, with individual names in silver on gold-bordered permanent name plates. Beautiful walnut plaque with eagle and victory torches. Write for price list today.

*Also U. S. and Allied Flags in all sizes. Write for prices.*

REGALIA MFG. CO.
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HOSE BRASS GOODS
WB LINE
THE WOOSTER BRASS CO.
WOOSTER, OHIO

BACK THE ATTACK ON FIRE WITH FIRE DEPARTMENT SUPPLIES OF DISTINCTION

★

THE WOOSTER BRASS CO.
WOOSTER, OHIO

★

*When you specify products bearing the TRUMPET trade mark you can SAVE and BANK on SAFETY*

# "COVER THAT ROOF"

What the Chief wants when another "line" is laid is plenty of pressure at the nozzle without twisting or writhing.

This is largely determined by the character of the fabric jacket. Selected quality cotton cord—specially processed and woven on exclusive looms—is used exclusively for Eureka Fire Hose, to give uniformity of weave throughout.

Yet lining, too, has an important function—to provide a smooth, flexible, leak-proof waterway.

Today, synthetic rubber must be used for all fire-hose linings. Fortunately exhaustive experimentation on the part of our scientists has developed synthetic rubber compounds which are giving highly satisfactory results in Eureka Fire Hose.

*If you have not yet received the valuable and important Eureka wall chart, "Directions for Care of Fire Hose", request a copy or copies today.*

*"For greater protection to life and property"*

**EUREKA FIRE HOSE**

*Division of United States Rubber Company*

1230 SIXTH AVENUE · ROCKEFELLER CENTER · NEW YORK 20, N. Y.

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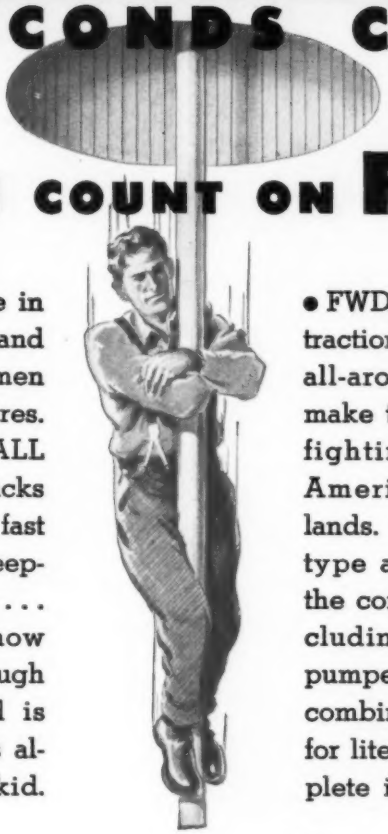
# WHEN SECONDS COUNT . . .



## YOU CAN COUNT ON FWDs

• Down-the-pole gains time in manning the apparatus . . . and FWDs gain time in getting men and equipment safely to the fires.

• With driving power in ALL wheels these modern fire trucks start fast, travel fast, work fast on fires . . . they climb steepest grades without hesitation . . . no mud is too deep, no snow too heavy, no going is too tough to stop them . . . no road is too slippery . . . traction is always "sure-footed", non-skid.

• FWDs have the speed, power, traction, ruggedness, safety and all-around dependability that make them the preferred fire-fighting trucks throughout America and many foreign lands. You can count on every type and size of fire truck in the complete FWD line . . . including rotary or centrifugal pumpers in triple or quadruple combinations, aerials, etc. Write for literature that includes complete information.

**THE FOUR WHEEL DRIVE AUTO COMPANY • Clintonville, Wisconsin**

*Canadian Factory: KITCHENER, ONTARIO*

FWD Model KH5, 500 gallon pumper, serving the city of Anchorage, Alaska.

BUY MORE WAR BONDS

STER—SAFER *Four-Wheel-Drive* FIRE APPARATUS

*Built By the Oldest and Original Exclusive Builders of Four-Wheel-Drive Trucks*

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GRISWOLD ORIGINAL WATERFOG

## FIRE!.. ON SHIPS AT SEA

in the oil fuel tanks deep in the bowels of a loaded ammunition ship—two other loaded ammunition ships alongside at an Army pier in Jersey City.

YET — fire fighter crewmen from the Navy and the Coast Guard with FOGNOZLS and FOGNOZL EXTENSION APPLICATORS confined the fire with WATERFOG allowing the ship to be towed to sea and scuttled—*not a single life lost.*—The Saturday Evening Post, May 13, 1944.

## ON THE HOME FRONT... FIRE!

—a plane taking off at a metropolitan airport — crashing into four other planes—all fully fueled with 100 octane gasoline—and then skidding into a hangar, a frame store room piled high with wooden motor crates—

YET—the airport's own firemen with FOGNOZLS and FOGNOZL EXTENSION APPLICATORS conquered the blaze with WATERFOG *without loss of life* — quickly and with minimum property loss.

—Location and details withheld under military censorship.

## Fear OF FIRE OVERCOME WITH FOGNOZLS

MUNICIPAL AND INDUSTRIAL FIRE DEPARTMENTS—Under recent WPB rulings many civilian fire departments can get sufficiently high priorities to purchase FOGNOZL equipment. Write us for details.

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